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A CENSUS OF BREEDING BIRDS OF FAYETTE COUNTY, TENNESSEE, INCLUDING THE 1997 FORAY

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Bird observations have been recorded for Fayette County, Tennessee since at least the late 1930s (Memphis chapter, Tennessee Ornithological Society, unpublished records). Since that time, published reports have primarily documented arrival and departure dates or unusual species occurrences (e.g. Coffey 1954, Waldron 1992). Other sources of breeding bird information in Fayette County include one Breeding Bird Survey, which has been conducted since 1966, and the Tennessee Breeding Bird Atlas surveys, conducted from 1986 through 1991 (Nicholson 1997).

Breeding birds were surveyed in Fayette County in 1997 during a TOS foray and during other counts throughout the nesting season. The objectives of this paper are to present relative abundance and species richness of breeding birds observed in Fayette County in 1997. Also included are notes on selected species encountered in 1997.

FAYETTE COUNTY

Fayette County encompasses approximately 1,823 km^2 in southwest Tennessee, in the East Gulf Coastal Plain Physiographic Province. The East Gulf Coastal Plain is characterized by low elevation and relief, gently rolling topography and swamp rivers with broad floodplains. Erosion has formed most of the landscape features (Wilkerson 1973). Elevation is generally from 97 to 111 m above sea level; the highest elevation is 161 m above sea level in the northwest corner of the county.

Row crop agriculture, primarily soybeans and cotton, occupied 42% of the land base at the time of this survey; forest lands occupied 31%, and grasslands (including pasture) occupied 24%. Urban areas occupied approximately 0.3% of the land base. The remaining 3% included miscellaneous land use such as open water and roads. In general, the eastern half of Fayette County was dominated by forests while the western half was dominated by pasture, hay fields and row crops, small woodlots and narrow riparian zones. Pine, oak, hickory, and beech were dominant species of

upland forests. Bottomland species of oak, sweetgum, tupelo, and bald cypress were dominant species of floodplain forests (Vissage and Duncan 1990). In 1997, Fayette County had a population of 34,000. This is projected to grow to 100,000 by 2020 (Donnie Culver, County Code Enforcement Officer, pers. comm.).

A major landholder is the Ames Plantation, with about 3,500 ha in Fayette County. Public lands were located primarily in the Wolf River floodplain and included the Tennessee Wildlife Resources Agency's Wolf River Wildlife Management Area (about 1,600 ha) and lands managed by the Tennessee Department of Environment and Conservation (about 800 ha).

METHODS

The Fayette County bird census was conducted from 20 May through 18 June 1997, which included the TOS foray from 23 through 26 May. During the census and foray, three distinctly different methods of were used to census birds in Fayette County. These methods were 1) specific searches of uncommon habitats, 2) roadside counts (miniroutes and a Breeding Bird Survey route), and 3) continuous counts from canoe.

The county was divided into six similar sized blocks. Observers recorded daily checklists of birds, which included birds observed between and after miniroute counts, during searches of uncommon habitats, and during one nocturnal count. Uncommon habitats in the county were identified by personal knowledge of local observers and examination of topographic maps. Uncommon habitats included mature upland hardwood forests and marshes at tributary headwaters. The accumulation of these check lists are reported here as general sightings in the county.

Bird counts were continuously conducted by canoe on the Wolf River from LaGrange to Rossville in three segments and on three consecutive mornings. Observers were careful not to count birds twice in sharp turns of the river. These counts are reported here as total checklists of birds observed on canoe trips. Ten roadside counts (miniroutes) were conducted; nine of these had first been censused during the Tennessee Breeding Bird Atlas project (Nicholson 1997), and an additional miniroute was added at the Wolf River WMA in 1995. These miniroutes were distributed throughout the county in a variety of habitats. Observers recorded the number of individuals on each of 15 stops per miniroute, each stop lasting three minutes. An additional Breeding Bird Survey route was completed and included in this survey. The total number of roadside stops was 200, 150 from miniroute counts and 50 from the Breeding Bird Survey route. These counts are reported here as number of total birds observed by species, and the number of stops on which a species occurred.

Twenty-four observers were involved in the census, including the foray. Total time accumulated was 149 party-hours in the county. About 15% of the party-hours were spent along the Wolf River and the remaining 85% elsewhere in the county. This total effort was higher than other forays in west Tennessee (e.g., Coffey 1976, Ford and Hamel 1993). Observers were asked to spend extra effort in search of three target species: Bachman's Sparrow, Song Sparrow, and Grasshopper Sparrow. Birds were considered to be nesting in the county if observed within the safe nesting dates as defined during Tennessee's Breeding Bird Atlas project. Safe dates vary among species (Nicholson 1997).

RESULTS AND DISCUSSION

One hundred fourteen species were observed in Fayette County between 20 May and 18 June 1997; of these, 101 were considered to nest in the county (Table 1). Eighty of the 114 species were observed on 200 miniroute and Breeding Bird Survey stops, with the remaining 34 species observed off route, in unusual habitats, or on the nocturnal count. Breeding species richness was similar to other west Tennessee county foray results. In Lauderdale County, 123 species were recorded, of which 99 were considered nesting species (Coffey 1976). Ninety-six species were recorded in Haywood County despite poor weather conditions (Ford and Hamel 1993). Seventy-eight species were recorded on 150 stops in Lauderdale County (Coffey 1976).

Red-winged Blackbird, Common Grackle, Indigo Bunting, Northern Cardinal, American Robin, Northern Mockingbird, Barn Swallow, Eastern Bluebird, and Mourning Dove were the most abundant species. Five Chuck-will's-widows and one Whip-poor-will were recorded on a 15-stop nocturnal miniroute in the Wolf River Wildlife Management Area. Twenty-four species were recorded less than three times, the most notable being Least Bittern and Short-eared Owl. During the Tennessee Breeding Bird Atlas, 54 species were confirmed as nesting in the county (Nicholson 1997). Three additional species were confirmed as nesting in the county during the foray. These species were Ruby-throated Hummingbird, Northern Rough-winged Swallow, and Brown Creeper.

Seventeen species were more frequently encountered in 22 party hours censusing along the Wolf River when compared to the remaining total effort of 127 party-hours censusing the variety of upland habitats of Fayette County (Table 2). Some of these species, such as Wood Duck, Red-shouldered Hawk, Prothonotary Warbler, American Redstart, and Swainson's Warbler, would be expected to reach their highest relative abundance in floodplain habitats. The high relative abundance of other species, however, may reflect the lack of forested upland habitats. For example, White-breasted Nuthatch, Blue-gray Gnatcatcher, Red-eyed Vireo, and Kentucky Warbler were recorded more frequently in floodplain forests, despite greater observer effort in upland habitats and intensive searches of the best remaining upland forests.

Bachman's Sparrow, Song Sparrow, and Grasshopper Sparrow were target species during the 1997 surveys. Bachman's Sparrow was not found in the county. The most recent record for Fayette County was 18/24 July 1974, northeast of LaGrange, on the Ames Plantation (Waldron 1974, Nicholson 1976). Recent surveys for Bachman's Sparrow on the Ames Plantation and in the southwest corner of the county have been unproductive. Song Sparrows occurred at three locations during the Foray. The Song Sparrow has been a summer resident in neighboring Shelby County (Waldron 1991) and Lake County (Waldron 1976). No additional published records exist for other west Tennessee counties. Four singing Grasshopper Sparrows occurred at two locations in Fayette County. Two birds were observed south of Rossville and two occurred northeast of Somerville. One individual had previously been observed 2 June 1996 (Waldron in press), east of the 1997 Rossville location. The first record of a Grasshopper Sparrow in Fayette County was from an observation on 22 June 1982, southwest of Rossville (Waldron 1982). The Grasshopper Sparrow has been recorded in 15 west Tennessee counties.

Three species that were not observed during the foray have been observed in Fayette County during past breeding seasons, King Rail, Bewick's Wren, and Willow Flycatcher. One King Rail was observed 26 June 1955 and two were observed 4 March 1956 (Ben Coffey, unpublished field notes). Bewick's Wren has occurred in the county during nesting seasons (Ben Coffey and others, unpublished field notes). The only confirmed west Tennessee nestings in recent history have been in Dyer County in 1980 (Waldron 1980) and Hardin County in 1991 (Waldron 1992). One Willow Flycatcher was observed on 5 June 1992 (Waldron 1992) in Fayette County.

Seven species require an additional note for a variety of reasons.

Least Bittern. One Least Bittern was flushed from a marsh along the North Fork of the Wolf River on 24 May 1997. Least Bittern and King Rail call tapes were used during two subsequent visits to this site in June. However, neither species was observed during June visits.

Barn Owl. Barn Owls were not observed during the Foray, although one was observed in early May 1997 near an area where three had been released in 1993. Since 1991, 34 Barn Owls have been released in Fayette County. Releases were conducted by the Memphis Zoo from their Raptor Rehabilitation Program.

Short-eared Owl. One Short-eared Owl was flushed from the roadside near Highway 59, north of Somerville, on 25 May 1997. During two subsequent June visits to that location the species was not seen, thus this bird was considered to be a late migrant. The nearest confirmed nesting location is in Ohio County, Kentucky (Palmer-Ball 1990).

Brown Creeper. One Brown Creeper was observed carrying nest material on 4 May 1997 in the Ghost River section of the Wolf River Wildlife Management Area (Melinda Welton, pers. comm.); a completed nest was confirmed on 24 May 1997 (Ford, pers. obs.). This is the first documented nest for Fayette County. Nesting season observations have been recorded in every west Tennessee watershed except the Loosahatchie River (Ford 1989, Nicholson in press).

Western Kingbird. One Western Kingbird was observed in Fayette County from 1-11 June and was considered a vagrant. This is the first county record and constitutes the sixth spring record in Tennessee.

Cerulean Warbler. Two singing male Cerulean Warblers were observed at two locations in Fayette County during the Foray. These represent the first records in the county of this species singing during the breeding season.

Scarlet Tanager. Four Scarlet Tanagers were observed at four locations in the southern half of Fayette County. Only two observations existed previously; these were one individual on 7 June 1969 and one on 3 May 1985 (Memphis chapter, Tennessee Ornithological Society, unpublished records).

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Table 1. The number of birds observed in Fayette County, Tennessee by different census techniques during the 1997 Tennessee Ornithological Society Foray and associated visits. General sightings included daily checklists of birds, independent from canoe or roadside stops. River routes were continuous counts conducted by canoe on the Wolf River from LaGrange to Rossville. Ten miniroutes were conducted, as well as one Breeding Bird Survey (n=200 stops). Reported here are the total number of birds and the number of stops observed. *indicates birds that were not considered to be nesting.

Birds	General sightings	River routes	Miniroutes and BBS # birds	#stops
Pied-billed Grebe	2	-	-	-
Least Bittern*	1	-	-	-
Great Blue Heron	41	13	5	5
Little Blue Heron*	1	-	-	-
Green Heron	15	2	5	3
Yellow-crowned Night-Heron	-	1	-	-
Canada Goose	69	-	9	2
Wood Duck	8	23	1	1
Mallard	21	1	3	1
Black Vulture	51	2	4	3
Turkey Vulture	170	3	9	7
Cooper's Hawk	1	-	-	-
Red-shouldered Hawk	8	12	-	-
Broad-winged Hawk	1	1	-	-
Red-tailed Hawk	34	1	2	2
American Kestrel	6	0	4	1
Wild Turkey	4	-	3	1
Northern Bobwhite	159	4	98	61
Killdeer	59	-	21	15
Spotted Sandpiper*	2	-	-	-
Rock Dove	41	-	13	4
Mourning Dove	298	3	87	58
Yellow-billed Cuckoo	37	15	11	6
Eastern Screech Owl	-	-	1	1
Great Horned Owl	1	1	-	-
Barred Owl	3	3	-	-
Short-eared Owl*	1	-	-	-
Common Nighthawk	1	1	-	-
Chuck-will's-widow	1	-	5	3
Whip-poor-will	2	-	-	-
Chimney Swift	112	11	61	34
Ruby-throated Hummingbird	21	30	9	9
Belted Kingfisher	4	6	-	-
Red-headed Woodpecker	24	3	2	2
Red-bellied Woodpecker	86	33	55	48
Downy Woodpecker	49	18	25	19
Hairy Woodpecker	9	3	2	2
Northern Flicker	12	6	6	5
Pileated Woodpecker	13	8	3	3
Olive-sided Flycatcher*	1	-	-	-
Eastern Wood-Pewee	146	12	41	40
Acadian Flycatcher	32	107	4	3
Eastern Phoebe	34	2	13	12
Great Crested Flycatcher	70	59	30	28
Eastern Kingbird	98	4	20	16
Western Kingbird*	1	-	-	-
Horned Lark	-	-	1	1
Purple Martin	106	-	40	8
Tree Swallow	2	-	-	-
Northern Rough-winged Swallow	4	5	-	-

Birds	General sightings	River routes	Miniroutes and BBS # birds	#stops
Bank Swallow*	1	-	-	-
Barn Swallow	213	8	104	33
Blue Jay	342	17	127	91
American Crow	183	14	132	82
Carolina Chickadee	81	66	43	23
Tufted Titmouse	124	80	71	61
White-breasted Nuthatch	1	15	1	1
Brown Creeper	-	1	-	-
Carolina Wren	93	33	31	30
Blue-gray Gnatcatcher	64	92	25	25
Eastern Bluebird	340	7	60	33
Wood Thrush	50	20	19	17
American Robin	439	-	108	57
Gray Catbird	3	2	2	2
Northern Mockingbird	398	-	77	62
Brown Thrasher	104	1	16	16
Cedar Waxwing*	95	-	45	2
Loggerhead Shrike	24	-	-	-
European Starling	227	-	50	19
White-eyed Vireo	85	47	24	22
Yellow-throated Vireo	15	4	7	6
Warbling Vireo	4	-	1	1
Philadelphia Vireo*	1	-	-	-
Red-eyed Vireo	28	33	9	9
Tennessee Warbler*	1	-	-	-
Northern Parula	54	-	9	8
Magnolia Warbler*	1	-	-	-
Black-throated Green Warbler*	1	-	-	-
Yellow-throated Warbler	5	27	-	-
Pine Warbler	19	-	1	1
Prairie Warbler	3	-	3	3
Cerulean Warbler	1	-	1	1
Black-and-white Warbler	3	-	-	-
American Redstart	1	34	3	2
Prothonotary Warbler	27	117	10	7
Worm-eating Warbler	2	-	1	1
Swainson's Warbler	-	11	-	-
Ovenbird	1	-	1	1
Louisiana Waterthrush	6	2	-	-
Kentucky Warbler	12	20	5	5
Common Yellowthroat	140	47	62	45
Hooded Warbler	1	3	-	-
Yellow-breasted Chat	78	8	41	29
Summer Tanager	79	17	19	17
Scarlet Tanager	3	1	-	-
Northern Cardinal	484	99	202	126
Rose-breasted Grosbeak*	2	-	-	-
Blue Grosbeak	56	-	11	8
Indigo Bunting	635	55	179	106
Dickcissel	117	-	20	7
Rufous-sided Towhee	184	15	70	59
Chipping Sparrow	42	-	14	6
Field Sparrow	87	1	36	25
Grasshopper Sparrow	4	-	-	-
Song Sparrow	3	-	-	-
Red-winged Blackbird	679	34	181	70
Eastern Meadowlark	289	-	123	62

Birds	General sightings	River routes	Miniroutes and BBS # birds	#stops
Common Grackle	679	32	167	61
Brown-headed Cowbird	159	45	61	40
Orchard Oriole	23	6	2	2
Northern Oriole	9	-	2	2
House Finch	27	-	1	1
American Goldfinch	60	17	20	15
House Sparrow	66	-	56	13

Table 2. During the 1997 TOS Foray in Fayette County, Tennessee, the 17 species listed below were more abundant along the Wolf River than in upland habitats. River route I included LaGrange to Bateman Bridge, River Route II included Bateman Bridge to Moscow, and River route III included Moscow to Rossville.

Bird species	River route I	II	III	Total
Yellow-crowned Night-heron	1	-	-	1
Wood Duck	6	12	5	23
Red-shouldered Hawk	6	-	6	12
Ruby-throated Hummingbird	14	10	6	30
Belted Kingfisher	1	2	3	6
Acadian Flycatcher	33	31	43	107
Rough-winged Swallow	2	-	3	5
White-breasted Nuthatch	7	5	3	15
Brown Creeper	1	-	-	1
Blue-gray Gnatcatcher	22	22	48	92
Red-eyed Vireo	14	7	12	33
Yellow-throated Warbler	9	9	8	26
American Redstart	3	-	30	33
Prothonotary Warbler	43	36	38	117
Swainson's Warbler	2	1	8	11
Kentucky Warbler	-	-	20	20
Hooded Warbler	-	1	2	3

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BIRDS OF THE OAK RIDGE RESERVATION

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Abstract. For more than 50 years, the security buffer land for the Department of Energy (DOE) nuclear and research facilities at Oak Ridge, Tennessee, has provided long-term habitat conservation for many bird species, including some which are protected because of their rarity. The Oak Ridge Reservation (ORR) is rich in important bird habitats that are being lost throughout the United States. These include large blocks of mature interior forest; extensive areas of undisturbed wetlands, open water, and riparian vegetation; and several hundred hectares of grass meadow. Numerous surveys have been conducted of the birds of the ORR since 1954. This paper summarizes the findings of those surveys and also reports in detail the results of breeding bird point counts conducted in 1995 and 1996 by the Partners in Flight (PIF) program of Tennessee. Nearly 200 species of birds are known to use the ORR, with more than 100 species present during the nesting season. Seventeen of these have state or federal protection. Seventeen of the 20 breeding birds identified by the PIF Program as preliminary priorities for conservation in the Ridge and Valley Province also use the ORR, and some are abundant. Fifteen of these are present during the breeding season. This richness of protected and conservation priority species is an indication of the value of the ORR both regionally and nationally in conserving bird diversity.

INTRODUCTION

The Oak Ridge Reservation (ORR), consisting of the Oak Ridge National Environmental Research Park and associated lands surrounding Department of Energy (DOE) facilities at Oak Ridge, Tennessee, is about 15,000 ha of mostly native contiguous forest in Roane and Anderson Counties in east Tennessee. Relatively protected from urbanization and intensive agriculture for more than 50 years, the ORR has become an important site for conservation of many plant and animal species, including birds, especially those species that require large blocks of contiguous habitat (Mann et al. 1996, Mitchell et al. 1996). Although researchers have published species lists from projects and ecological studies on the ORR for many years (Krumholz 1954, Howell 1958, Anderson and Shugart 1974, Anderson et al. 1977, PMC 1977, Kroodsma 1982, Kroodsma 1984a, Kroodsma 1984b, Smith and Shugart 1987, Hardy 1991, Minser et al. 1992, Buehler 1994, Mitchell 1998), a comprehensive inventory has not been completed.

The earliest documentation of birds on the ORR was a species list compiled during a three-year intensive field study in and around White Oak Lake and White Oak Creek (Krumholz 1954). This study was followed a few years later by a June

grid-point survey of birds at 157 points in about 3400 acres in the White Oak Creek and Melton Branch Watersheds (Howell 1958). These two study areas partially overlapped, but the Krumholz study focussed on the vicinity of White Oak Creek, which was primarily wetlands, abandoned farm fields, and small wood lots, and included species seen throughout the year. The Howell study covered only breeding birds but also included upland forest. Howell also documented species occurring in other areas of the ORR during June and July. Additional quantitative surveys for birds were conducted during the breeding season in the proposed Breeder Reactor Site on a large peninsula on the southwestern ORR, no longer part of the ORR (PMC 1977); on Walker Branch Research Watershed, a 100 ha area of mostly mature hardwood forest (Anderson and Shugart 1974, Smith and Shugart 1987); on several power line rights-of-way and adjacent forest (Anderson et al. 1977, Kroodsma 1982, Kroodsma 1984a, Kroodsma 1984b); and in white pine (*Pinus strobus*) and loblolly pine (*P. taeda*) plantations < 20 ha in size adjacent to hardwood forest (Hardy 1991). Kroodsma's studies spanned several years and were located throughout the Reservation on Haw and Chestnut Ridges, including part of Haw Ridge Park, no longer part of the ORR. The Breeder Reactor Site surveys included quantitative surveys in late May and mid-December as well as qualitative surveys in March, May, August, and November. Data were also collected between 1986 and 1991 as part of the Breeding Bird Atlas project (Nicholson 1997). Mitchell et al. (1996) conducted an intensive survey for threatened and endangered vertebrates on the entire ORR from 1994 to 1996 and documented seasonal occurrences of all birds seen. Through the Tennessee Wildlife Resources Agency, the ORR joined the Partners in Flight (PIF) Initiative in 1995, providing an additional impetus for compiling data about abundances and habitat use of birds on the ORR. Available data in electronic form from PIF breeding bird surveys in 1995 and 1996 are summarized herein. This paper combines these sources of information to document what is known of the birds of the ORR, their habitats, seasonal occurrence, and abundance.

THE OAK RIDGE RESERVATION

The ORR was originally formed in 1942 from about 1000 individual farmsteads as a security buffer for military activities. Of the nearly 24,000 ha originally included in the ORR in 1942, about 15,000 ha remain mostly undeveloped - less than 3,000 ha contain developed sites for the three DOE facilities and less than 1,400 ha are in waste sites or remediation areas. The ORR is a large and nearly contiguous island of forest within a larger landscape that is fragmented by urban development and agriculture (Mann et al. 1996). Undeveloped areas of the ORR are managed as a National Environmental Research Park (NERP) Biosphere Reserve and a management unit in the Southern Appalachian Man and the Biosphere (SAMAB) regional biosphere reserve. Currently, all of the ORR is a wildlife management area, managed by the Tennessee Wildlife Resources Agency (TWRA) (Parr and Evans 1992).

The ORR provides three major important habitat types for birds: 1) large blocks of mature forest, which are especially important for nesting and foraging of neotropical migrants; 2) extensive areas of open water, undisturbed wetlands, streams, and riparian vegetation, which are used by wading birds, shorebirds, and waterfowl; and 3) an extensive area of grassland. All three habitat types were once common in the region but are increasingly threatened throughout the United States

(Noss et al. 1995). Other important bird habitats of the ORR are early successional growth following the clearcut harvesting of pine forest land and brushy power line rights-of-way. A preliminary report on biodiversity of the ORR by The Nature Conservancy (1995) recognized 69 distinct conservation sites and three large landscape complexes that are important because of their concentrations of rare species, rare plant communities, and large blocks of relatively undisturbed native vegetation. One of these large landscape complexes includes part of areas inventoried by Krumholz (1954) and Howell (1958) more than 50 years ago and another includes Walker Branch Watershed.

Currently, about 70% of the ORR is in forest cover and about 20% is transitional, consisting of old fields, agricultural areas, recently clearcut forest lands, roadsides, and utility corridors, with the remainder in urbanized or regulated areas (Washington-Allen et al. 1995). The open agricultural fields currently make up less than 2% of the area (Mann et al. 1996). Forests are mostly oak-hickory, pine-hardwood, or pine (including plantations) with minor areas of northern hardwoods, hemlock or white pine, and floodplain forests. A major pine beetle outbreak in 1993 killed about 450 ha of loblolly pine. Most of this 450 ha is now primarily native early successional vegetation, providing important habitat for several bird species whose populations are declining throughout the region (Roedel et al. 1996).

Non-forested areas include power line rights-of-way, mowed areas near laboratory facilities, and a few grass meadows which were previously used as pasture and are now maintained by annual mowing. Some of these fields have been in continuous pasture or hayfield for more than 40 years. Most of the grass is meadow fescue (Festuca sp.). Some of these grassy areas are only a few hectares in size, but the Freel's Bend peninsula contains hundreds of hectares of hayfields. The Freel's Bend area is high quality habitat for grassland birds because it is extensive; is isolated from human disturbance except for annual hay harvest; and is surrounded by forest land, riparian vegetation, and open water.

Extensive wetlands and riparian vegetation are present along the Melton Hill and Watts Bar Reservoir system of the Clinch River, which forms the southwestern, southern, and southeastern boundaries of the ORR. This combination of protected natural ecosystems, river reservoirs and embayments bordering the ORR, and headwater streams of high water quality provide good foraging habitat for shorebirds, wading birds, and waterfowl. Several open water ponds near the laboratory facilities and throughout the ORR also provide habitat for waterfowl.

DATA SOURCES

Data in this report are from 1) available electronic files of the first two years of the PIF Breeding Bird Survey, 2) the published threatened and endangered species survey (Mitchell et al. 1996), 3) the Breeding Bird Atlas (data sheets for ORR survey blocks, see Nicholson 1997), 4) off-plot observations during the PIF Breeding Bird Survey, and 5) ongoing field surveys, especially the bimonthly environmental survey that includes incidental observations of land birds (K. Roy, 1998, personal communication). For species of conservation concern, historical data from published reports and unpublished observations are also presented.

In June 1995, the PIF Program surveyed birds during the breeding season on the ORR along 10 routes. Nine of these routes were resurveyed in 1996, and 6 routes comprised of 91 points were available in electronic form for this report. The survey

was repeated during June 1996. All 10 routes comprised of 159 points surveyed in 1996 were available for this report, with one route comprised of 18 points added. The added data from 1996 represent a higher percentage of early successional habitats than the data from 1995, thus favoring birds using those habitats in comparisons of the data from the two years (Table 1). A severe winter period in 1995-1996 may have caused other differences between the data from 1995 and 1996 for some year-round resident species, such as the Carolina Wren, which exhibited a dramatic decline in numbers in 1996.

Routes were placed either off-road or along little used gravel or dirt access roads. Each route was surveyed in early morning, tallying all birds heard or seen both in and outside of each 50-m radius plot during a five minute time period. Relative abundance was determined by tallying all birds heard during the survey. In 1996, about one quarter of the points were in openings or fields, with the remainder equally split between mature forest and pole-sized or younger forest.

RESULTS AND DISCUSSION

Table 1 lists all birds observed during recent surveys and includes the majority of birds which currently use the ORR. A total of 186 species of terrestrial birds, waterfowl, wading birds, and shorebirds have been documented. In the 1995 and 1996 PIF surveys, of more than 100 bird species known to occur on the ORR during the breeding season, 76 were observed at one or more PIF points (Table 1). About half of these species are neotropical migrants. The most abundant bird observed in both 1995 and 1996 was the Red-eyed Vireo (in 1996 accounting for 12% of all birds counted and occurring at 76% of the points). In 1996, about half of all species were observed at fewer than 10 points, but 16 species were found at more than 30 points. The American Crow and Indigo Bunting were the second and third most common and abundant species, accounting for 7% and 6% of all birds counted, respectively, and occurring at 51% and 44% of the points, respectively. The other most commonly recorded species during the 1996 PIF counts were the Northern Cardinal, Carolina Chickadee, Wood Thrush, Yellow-breasted Chat, Tufted Titmouse, Scarlet Tanager, Blue-gray Gnatcatcher, and Yellow-billed Cuckoo. Each of these species was heard on at least 40 points and totaled over 50 individuals across all points in 1996.

The threatened and endangered species survey documented nearly 20 additional species during the breeding season, more than 30 winter resident species, more than 30 migrants, and at least one transient species (Table 1). The survey also documented the abundance and locations of 17 species with either state or federal status (Table 1). Additional species have been documented in ongoing field surveys by the authors and Tennessee Ornithological Society volunteers.

Populations of some neotropical migrants, such as the Wood Thrush and Cerulean Warbler, have declined rapidly in the last 10 years (Hunter et al. 1993a, Robinson et al. 1995, Askins 1995), and Tennessee has been described as the state with the highest percentage of declining breeding birds (Walker 1997). PIF has developed a ranking system of species of conservation concern in which each species in each geographic region is ranked between seven (low concern) and 35 (extremely high concern) based on a combination of factors. These factors are 1) global abundance, 2) global breeding distribution, 3) global wintering distribution, 4) threats during breeding season, 5) threats during non-breeding migration and wintering

season, 6) local population trend, and 7) importance of the area where the species is being ranked relative to the rest of the species' range (Hunter et al. 1993a, Hunter et al. 1993b, Roedel et al. 1996, Hunter 1998). These ranks are subject to continual revision as more data becomes available. Ranks reported here for the Ridge and Valley were current in January 1998. Similar rankings for migrants and wintering birds are not yet available (Hunter 1998).

Roedel et al. (1996) discuss the 20 bird species whose populations are considered to be of "high concern, vulnerable, and likely in need of management and/or monitoring" with scores of 24 or higher in the Ridge and Valley Region of Tennessee. Of these 20 species, all but the Red-cockaded Woodpecker have been documented to occur on the ORR. All but two of the species with high PIF concern scores for the Ridge and Valley (Swainson's Warbler and Bewick's Wren) have been observed on the ORR in the current surveys and some were abundant (Table 1). In fact, four species of high concern were among the top 20 species in the 1996 ORR PIF survey in terms of percentage of points with at least one observation: Wood Thrush (8th, 33%); Field Sparrow (17th, 16%); Prairie Warbler (18th, 15%); and Hooded Warbler (20th, 13%).

In addition, among the top 10 species in percentage of points in 1996 were two other species of moderate concern (PIF scores of 19-23, of average vulnerability), both with PIF scores of 23: Yellow-breasted Chat (7th, 35%) and Yellow-billed Cuckoo (10th, 31%). Furthermore, there were six species with PIF scores of 23 or higher that were not rare during the 1996 survey. These species were observed at 3% or more of the points: Summer Tanager (Score 24; 9% of points); Acadian Flycatcher (Score 24; 6%); Kentucky Warbler (Score 23, 4%); Yellow-throated Warbler (Score 23, 4%); Worm-eating Warbler (Score 24; 3%); and Yellow-throated Vireo (Score 26; 3%). The Black-and-white Warbler (Score 22) was only observed on one plot during the PIF surveys, but was previously reported by Howell (1954) as uncommon but widespread in upland forests and as somewhat abundant in Kroodsma's studies (1984b) with densities of 10 pairs/40 ha in some locations.

SELECTED SPECIES ACCOUNTS

The following species found on the ORR are 1) of conservation concern in the Ridge and Valley Region (PIF concern scores greater than 23, state or federal status), 2) game birds, or 3) somewhat uncommon in the Ridge and Valley Region. Protected birds include seven raptors, six migrant waterfowl, and two grassland birds.

Double-crested Cormorant. This cormorant is a migrant seen in spring, summer, and fall. It was documented in June 1994; May, July, August, and October 1995; and April 1996, at six locations along Melton Hill and Watt's Bar Reservoirs of the Clinch River, an ORNL facility pond, and East Fork Poplar Creek (Mitchell et al. 1996). It had not been previously reported from the ORR.

Anhinga. A transient Anhinga was documented on 20 June 1994, at the ORNL Swan Pond (Mitchell et al. 1996). It had not been previously reported from the ORR.

Great Blue Heron. This heron was reported by Krumholz (1954) and Howell (1958) who documented five occurrences in the White Oak Creek study area. At that time, it was not thought to breed on the ORR. Currently, there are two active colonies on East Fork Poplar Creek and its embayment on Watt's Bar Reservoir.

Table 1. Birds of the Oak Ridge Reservation, showing abundance figures from 1995 and 1996 Partners in Flight breeding season point counts, season(s) of observed occurrence, and conservation status.

	Abundance[1]					
	Percent of Points		Percent of Birds			
Common Name	1995	1996	1995	1996	Season[2]	Cons Status[3]
LOONS						
Common Loon	0	0	0	0	S/F	
GREBES						
Pied-billed Grebe	0	0	0	0	W	
Horned Grebe	0	0	0	0	W	
Eared Grebe	0	0	0	0	T	
CORMORANTS						
Double-crested Cormorant	0	0	0	0	S/F	SNM
DARTERS						
Anhinga	0	0	0	0	T	SNM
BITTERNS & HERONS						
Great Blue Heron	7	8	0.6	0.6	Y/B	
Great Egret	0	0	0	0	B	SNM
Snowy Egret	0	0	0	0	S/F	SNM
Little Blue Heron	0	0	0	0	S/F	SNM
Green Heron	0	1	0	<0.1	B	
Black-crowned Night-heron	1	2	0.1	0.1	B	
SWANS, GEESE & DUCKS						
Canada Goose	3	6	1.1	1.8	Y/B	
Wood Duck	0	0	0	0	Y/B	
Green-winged Teal	0	0	0	0	S/F	
American Black Duck	0	0	0	0	W	
Mallard	0	0	0	0	Y/B[4]	
Northern Pintail	0	0	0	0	W	
Blue-winged Teal	0	0	0	0	S/F	
Gadwall	0	0	0	0	W	
American Wigeon	0	0	0	0	W	
Canvasback	0	0	0	0	S/F	
Ring-necked Duck	0	0	0	0	W, S/F	
Greater Scaup	0	0	0	0	S/F	
Bufflehead	0	0	0	0	S/F	
Hooded Merganser	0	0	0	0	W, S/F	
Red-breasted Merganser	0	0	0	0	S/F	
Ruddy Duck	0	0	0	0	W	
VULTURES						
Black Vulture	1	1	1.1	0.7	Y/B	
Turkey Vulture	0	1	0	0.1	Y/B	
KITES, HAWKS, EAGLES & ALLIES						
Osprey	0	1	0	0.1	B	
Bald Eagle	0	0	0	0	W	FT, ST
Northern Harrier	0	0	0	0	S/F	SNM
Sharp-shinned Hawk	0	0	0	0	Y/B	SNM
Cooper's Hawk	0	0	0	0	Y/B	SNM
Red-shouldered Hawk	0	0	0	0	Y/B	
Broad-winged Hawk	0	1	0	<0.1	B	
Red-tailed Hawk	4	3	0.5	0.2	Y/B	

	Abundance[1]					
	Percent of Points		Percent of Birds			
Common Name	1995	1996	1995	1996	Season[2]	Cons Status[3]
FALCONS						
American Kestrel	0	1	0	<0.1	Y/B	
Peregrine Falcon	0	0	0	0	S/F	FT, ST
GROUSE, TURKEYS & QUAIL						
Ruffed Grouse	0	0	0	0	B[4]	
Wild Turkey	2	3	0.4	0.3	Y/B	
Northern Bobwhite	1	1	0	0.8	Y/B	
RAILS & COOTS						
Sora	0	0	0	0	S/F	
American Coot	0	1	0	<0.1	Y/B	
CRANES						
Sandhill Crane	0	0	0	0	S/F	SNM
PLOVERS						
Killdeer	0	0	0	0	Y/B	
SANDPIPERS & ALLIES						
Greater Yellowlegs	0	0	0	0	S/F	
Lesser Yellowlegs	0	0	0	0	S/F	
Solitary Sandpiper	0	0	0	0	S/F	
Spotted Sandpiper	0	0	0	0	S/F	
Pectoral Sandpiper	0	0	0	0	S/F	
Common Snipe	0	0	0	0	S/F	
American Woodcock	0	2	0	0.1	Y/B	
GULLS & TERNS						
Bonaparte's Gull	0	0	0	0	T	
Ring-billed Gull	0	0	0	0	W	
Caspian Tern	0	0	0	0	T	
PIGEONS & DOVES						
Rock Dove	0	0	0	0	Y/B	
Mourning Dove	11	11	1.4	1.5	Y/B	
CUCKOOS						
Yellow-billed Cuckoo	21	31	2.3	2.8	B	
OWLS						
Eastern Screech Owl	0	0	0	0	Y/B	
Great Horned Owl	0	0	0	0	Y/B	
Barred Owl	0	0	0	0	Y/B	
GOATSUCKERS						
Common Nighthawk	0	0	0	0	B	
Chuck-will's-widow	0	0	0	0	B	
Whip-poor-will	0	2	0	0.2	B	
SWIFTS						
Chimney Swift	1	2	0.1	0.1	B	
HUMMINGBIRDS						
Ruby-throated Hummingbird	2	3	0.2	0.2	B	
KINGFISHERS						
Belted Kingfisher	0	0	0	0	Y/B	
WOODPECKERS						
Red-bellied Woodpecker	36	25	3.7	2.1	Y/B	
Yellow-bellied Sapsucker	0	0	0	0	W	SNM
Downy Woodpecker	11	8	0.8	0.6	Y/B	
Hairy Woodpecker	19	6	1.6	0.6	Y/B	

	Abundance[1]					
	Percent of Points		Percent of Birds			
Common Name	1995	1996	1995	1996	Season[2]	Cons Status[3]
Northern Flicker	10	8	0.8	0.7	Y/B	
Pileated Woodpecker	15	10	1.9	0.7	Y/B	
TYRANT FLYCATCHERS						
Olive-sided Flycatcher	0	0	0	0	S/F	SNM
Eastern Wood-pewee	0	1	0	0.1	B	C
Acadian Flycatcher	9	6	1.1	0.6	B	C
Willow Flycatcher	0	1	0	0.1	B	
Eastern Phoebe	0	4	0	0.3	Y/B	
Great Crested Flycatcher	3	4	0.3	0.4	B	
Eastern Kingbird	1	1	0.1	0.1	B	
LARKS						
Horned Lark	0	0	0	0	W	
SWALLOWS						
Purple Martin	0	0	0	0	B	
Tree Swallow	0	0	0	0	B	
Northern Rough-winged Swallow	0	1	0	0.6	B	
Cliff Swallow	0	0	0	0	B	
Barn Swallow	0	5	0	1	B	
JAYS & CROWS						
Blue Jay	31	22	4	2.9	Y/B	
American Crow	62	51	9.6	7.3	Y/B	
TITMICE & CHICKADEES						
Carolina Chickadee	46	33	6.2	4.7	Y/B	
Eastern Tufted Titmouse	33	37	4.8	3.6	Y/B	
NUTHATCHES						
Red-breasted Nuthatch	0	0	0	0	W	
White-breasted Nuthatch	16	11	1.9	0.8	Y/B	
Brown-headed Nuthatch	0	0	0	0	B	C
CREEPERS						
Brown Creeper	0	0	0	0	W	
WRENS						
Carolina Wren	49	3	6.4	0.2	Y/B	
House Wren	0	0	0	0	B	
Winter Wren	0	0	0	0	W	
Sedge Wren	0	0	0	0	S/F	
KINGLETS, GNATCATCHERS & THRUSHES						
Golden-crowned Kinglet	0	0	0	0	W	
Ruby-crowned Kinglet	0	0	0	0	W	
Blue-gray Gnatcatcher	14	27	1.6	2.8	B	
Eastern Bluebird	3	8	0.5	1.1	Y/B	
Veery	0	0	0	0	S/F	
Swainson's Thrush	0	0	0	0	S/F	
Hermit Thrush	0	0	0	0	W	
Wood Thrush	41	33	5.6	4.3	B	C
American Robin	1	3	0.1	0.4	Y/B	
THRASHERS & MOCKINGBIRDS						
Gray Catbird	0	1	0	<0.1	B	
Northern Mockingbird	0	3	0	0.3	Y/B	
Brown Thrasher	2	1	0.2	0.1	Y/B	
WAXWINGS						

	Abundance[1]					
	Percent of Points		Percent of Birds			
Common Name	1995	1996	1995	1996	Season[2]	Cons Status[3]
Cedar Waxwing	1	1	0.1	0.1	Y/B	
SHRIKES						
Loggerhead Shrike[4]	0	0	0	0	B[3]	FS,ST
STARLINGS						
European Starling	0	0	0	0	Y/B	
VIREOS						
White-eyed Vireo	2	11	0.5	1	B	
Blue-headed Vireo	0	0	0	0	S/F	
Yellow-throated Vireo	0	3	0	0.2	B	C
Red-eyed Vireo	75	76	11.3	12	B	
WOOD-WARBLERS						
Blue-winged Warbler	0	0	0	0	B	C
Golden-winged Warbler	0	0	0	0	S/F	
Tennessee Warbler	0	0	0	0	S/F	
Nashville Warbler	0	0	0	0	S/F	
Northern Parula	1	3	0.1	0.4	B	
Yellow Warbler	0	0	0	0	B	
Chestnut-sided Warbler	0	0	0	0	S/F	
Magnolia Warbler	0	0	0	0	S/F	
Cape May Warbler	0	0	0	0	S/F	
Black-throated Blue Warbler	0	0	0	0	S/F	
Yellow-rumped Warbler	0	0	0	0	W, S/F	
Black-throated Green Warbler	0	0	0	0	S/F	
Blackburnian Warbler	0	0	0	0	S/F	
Yellow-throated Warbler	0	4	0	0.4	B	
Pine Warbler	0	11	0	1.4	B	
Prairie Warbler	20	15	2.6	1.5	B	C
Palm Warbler	0	0	0	0	S/F	
Bay-breasted Warbler	0	0	0	0	S/F	
Blackpoll Warbler	0	0	0	0	S/F	
Cerulean Warbler	0	0	0	0	B[3]	FS
Black-and-white Warbler	1	0	0.1	0	B	
American Redstart	0	0	0	0	S/F	
Prothonotary Warbler	0	0	0	0	B	C
Worm-eating Warbler	0	3	0	0.2	B	C
Ovenbird	12	21	1.4	2.2	B	
Northern Waterthrush	0	0	0	0	S/F	
Louisiana Waterthrush	0	0	0	0	B	C
Kentucky Warbler	4	4	0.4	0.6	B	
Common Yellowthroat	4	18	0.4	1.7	B	
Hooded Warbler	9	13	1	1	B	C
Wilson's Warbler	0	0	0	0	S/F	
Canada Warbler	0	0	0	0	S/F	
Yellow-breasted Chat	19	35	2.6	3.8	B	
TANAGERS						
Summer Tanager	3	9	0.5	0.7	B	C
Scarlet Tanager	32	38	3.8	3.5	B	
CARDINALS, GROSBEAKS & ALLIES						
Northern Cardinal	44	40	4.7	4.5	Y/B	

Common Name	Abundance[1] Percent of Points 1995	1996	Percent of Birds 1995	1996	Season[2]	Cons Status[3]
Rose-breasted Grosbeak	0	0	0	0	S/F	
Blue Grosbeak	1	3	0.1	0.2	B	
Indigo Bunting	28	44	3.6	6	B	
Dickcissel	0	1	0	<0.1	B	
TOWHEES, SPARROWS & ALLIES						
Eastern Towhee	19	20	2	2	Y/B	
American Tree Sparrow	0	0	0	0	W	
Chipping Sparrow	1	2	0.1	0.4	Y/B	
Field Sparrow	5	16	0.6	1.6	Y/B	
Savannah Sparrow	0	0	0	0	W	
Grasshopper Sparrow	0	0	0	0	B	SNM
Fox Sparrow	0	0	0	0	W	
Song Sparrow	4	3	0.7	0.2	Y/B	
Swamp Sparrow	0	0	0	0	W	
White-throated Sparrow	0	0	0	0	W	
White-crowned Sparrow	0	0	0	0	W	
Dark-eyed Junco	0	0	0	0	W	
BLACKBIRDS & ALLIES						
Bobolink	0	0	0	0	S/F	
Red-winged Blackbird	2	11	0.3	2.6	Y/B	
Eastern Meadowlark	2	6	0.2	0.7	Y/B	
Common Grackle	3	8	1.1	1.4	Y/B	
Brown-headed Cowbird	5	10	0.6	1.1	Y/B	
Orchard Oriole	0	1	0	<0.1	B	C
Northern Oriole	0	0	0	0	B	
CARDUELINE FINCHES						
Purple Finch	0	0	0	0	W	
House Finch	0	3	0	0.6	Y	
Pine Siskin	0	0	0	0	W	
American Goldfinch	20	11	2.4	1.2	Y	
Evening Grosbeak	0	0	0	0	W	
OLD WORLD SPARROWS						
House Sparrow	0	0	0	0	Y/B	

[1] Abundance - Column 1: Percent of 91 PIF permanent breeding bird survey points with at least one occurrence during 1995 survey; Column 2: Percent of 159 points during 1996 survey; Column 3: Percent of total 1069 birds observed at survey points in 1995; Column 4: Percent of total 2141 birds observed in 1996.

[2] Season: season this species has been observed on the ORR: B = breeding season, S/F = spring or fall migrant, W = winter resident, T = transient, Y = year-round. Data are from Mitchell et al. (1996), Breeding Bird Atlas surveys in 1987-1991, ongoing PIF point count surveys, and personal records of J. Mitchell, J. Evans, and D. Joslin.

[3] National, state, and regional conservation status: FE = federally endangered, FT = federally threatened, FS = special concern at national level (previous C2 candidates for listing), SE = Tennessee state endangered, ST = Tennessee state threatened, SNM = Tennessee state in need of management, C = species identified by PIF in need of conservation attention in east Tennessee (Conservation Score > 23; see text for further explanation).

[4] Present during the breeding season but not known to be breeding on the OR.

These herons are commonly seen along Watt's Bar and Melton Hill reservoirs and along major streams.

Great Egret. Krumholz (1954) reported this egret in the White Oak Creek study area. Recently it was documented at seven locations, including White Oak Lake, in June 1994; June through Oct 1995; and in April 1996 (Mitchell et al. 1996).

Snowy Egret. This migrant was documented at beaver ponds near the K-25 facility 16 April 1996 (Mitchell et al. 1996). It had not been previously reported from the ORR.

Little Blue Heron. This heron was first documented on the ORR by Krumholz (1954) in the White Oak Creek study area. It has recently been documented at two locations near the K-25 complex on the western part of the ORR and at White Oak Lake, July through September 1996, presumably during migration and post-breeding dispersal (Mitchell et al. 1996).

Canada Goose. Krumholz (1954) reported Canada Goose in the White Oak Lake area prior to establishment of the nonmigratory populations in east Tennessee. Abundant man-made foraging and nesting areas on the ORR have resulted in an extremely successful non-migratory population which has been used to stock other locations (Parr and Evans 1992).

Osprey. The Osprey was documented by Krumholz (1954) in the White Oak Lake study area and Kroodsma (1987) mentions their occurrence near the ORR, but not the presence of a breeding population. There are now active nest platforms on Poplar Creek, Melton Hill Reservoir, and Watt's Bar Reservoir that contribute to a successful breeding population of Osprey on the ORR. Mitchell et al. (1996) documented their presence in June 1994; May, June, and July 1995; March and April 1996.

Bald Eagle. Krumholz (1954) noted the presence of this eagle near White Oak Lake. It is known to winter on the ORR and may also be a summer resident (Mitchell et al. 1996). Seen regularly along Watt's Bar and Melton Hill Reservoirs and at Freel's Bend, it currently nests near the ORR on Watt's Bar Reservoir in Roane County (W. Yambert, 1998, personal communication). Documentation includes August 1994 and January 1996 at six locations along the reservoirs, including Freel's Bend (Mitchell et al. 1996).

Northern Harrier. Krumholz (1954) first documented the Northern Harrier on the ORR in the White Oak Lake study area. It was recently documented in September and November 1995 at Freel's Bend, Hembree Marsh, and at two additional locations near Watt's Bar Reservoir (Mitchell et al. 1996). It is a migrant but is also a possible winter resident in wetland openings and fields.

Sharp-shinned Hawk. This resident hawk was documented by Krumholz (1954) and Howell (1958) in the White Oak Creek area. Howell (1958) also documented a nest with young near the confluence of Poplar Creek with the Clinch River (currently Watt's Bar Reservoir) and Hardy (1991) documented a nesting pair in a mature white pine plantation in 1989. The most recent nesting record is 1994 on the western part of the ORR near the area of the Breeder Reactor Survey (Mitchell et al. 1996). It has recently been documented at eight locations throughout the ORR, including Freel's Bend and Walker Branch Watershed, in May, June, August, and September 1995 and January 1996 (Mitchell et al. 1996).

Cooper's Hawk. Krumholz (1958) documented the presence of this year-round resident hawk in the White Oak Creek area, but it was not reported in Howell's

(1958) survey in the same general area. It has recently been documented at nine locations throughout the ORR during every season of the year (Mitchell et al. 1996).

Peregrine Falcon. This uncommon migrant falcon has recently been documented on 15 May 1995, and 25 April 1996 in the eastern ORR and near the Walker Branch Watershed (Mitchell et al. 1996).

Wild Turkey. Wild Turkey was restored to the ORR in 1986 and 1987 (Minser et al. 1992). The population has been so successful that turkeys are now hunted, as well as trapped and relocated to other areas by TWRA to establish breeding flocks.

Sandhill Crane. This crane is an occasional migrant. One was documented on 5 March 1995 at Poplar Creek (Mitchell et al. 1996).

Yellow-bellied Sapsucker. The Yellow-bellied Sapsucker probably winters in most forest types of the ORR. It was reported by Krumholz (1954), by the Breeder Reactor Environmental Report (PMC 1977), and was recently documented in forested locations from November through March (Mitchell et al. 1996). Hardy (1991) reported two Yellow-bellied Sapsuckers in loblolly pine sawtimber plantations during the breeding season in 1989. This species is not known to breed in Tennessee except at high elevations (Nicholson 1997); therefore, these were probably late migrants.

Olive-sided Flycatcher. This flycatcher was recently documented on 12 and 15 May 1995 in forested areas of Freel's Bend (Mitchell et al. 1996). It had not previously been reported on the ORR.

Eastern Wood-pewee. The Eastern Wood-pewee was listed by Krumholz (1954) in the White Oak Creek study area, but it may not have been common as only three were reported in same general area in the Howell survey (1958). About 15 years later, in the Anderson and Shugart (1974) study, 90 individuals were noted on the Walker Branch Watershed. It was not reported in Kroodsma's 1977 to 1981 study (Kroodsma 1984b), but Hardy (1991) reported one in loblolly pine with extensive hardwood understory. Large, tall trees in open woodland and along forest edges provide habitat preferred by Eastern Wood-pewee, and this habitat is not currently common on the ORR. Wood-pewees were not observed during the 1995 PIF surveys, and only two were documented at two points in 1996.

Acadian Flycatcher. This flycatcher was not reported by Krumholz (1954), but Howell (1958) reported 14 individuals at 13 points (8%), only occurring in the fringe of bushes and small trees along the reservoir and near small streams. The Breeder Reactor Environmental Report (PMC 1977) reported its occurrence during the breeding season in upland hardwoods, and Anderson and Shugart (1974) reported seven individuals on Walker Branch Watershed during the breeding season. It occurred at relatively low densities (4 to 7 pairs/40 ha) in interior forest in Kroodsma's 1977 through 1981 studies (Kroodsma 1984b) and Hardy (1991) reported one in mature white pine plantation transects during the breeding season. It is currently widespread in mature forest of the ORR and is one of eight PIF species of concern in the Ridge and Valley that require interior (unfragmented) mid- to late- successional forest habitat for successful nesting (Roedel et al. 1996).

Willow Flycatcher. This flycatcher has been expanding into Tennessee from the Midwestern prairie states since 1958 and is still uncommon, though not of high conservation concern, in the Ridge and Valley (PIF Score 20) (Nicholson 1997). Kroodsma (1998, personal communication) observed birds calling on territory during the breeding season in the 1980s in two locations near Bethel Valley Road, and

two were observed near willows growing along a stream embayment of Melton Hill Reservoir at Freel's Bend in the 1996 PIF survey (Table 1).

Brown-headed Nuthatch. This nuthatch was reported during the summer of 1996 in the western part of the ORR in mature loblolly pine plantations near the Watt's Bar reservoir at the K-25 facility. This is its northernmost reported occurrence in the Ridge and Valley and its first reported occurrence on the ORR (K. Roy, 1998, personal communication). It has also been observed near the TVA Melton Hill Dam picnic area, across the river from the ORR.

Bewick's Wren. This wren was formerly reported from the Freel's Bend area and the White Oak Creek valley (Krumholz 1954, Howell 1958). Abundant nesting habitat was present on abandoned farmlands and homesteads following establishment of the ORR. This species has been declining dramatically throughout Tennessee for the last few decades (Nicholson, 1997), and it was last documented on the ORR in the 1970s (PMC 1977).

Wood Thrush. This thrush, which requires interior (unfragmented) mid- to late-successional forest habitat for successful nesting, has been abundant in all bird surveys in hardwood forest on the ORR. Krumholz (1954) listed it and Howell's 1957 survey documented 16 individuals at 13 points (8%) in the White Oak Creek/Melton Valley study area. He estimated that about 55% of the study area was in mature forest at that time. This species was also documented in mixed hardwood forest in the Breeder Reactor Environmental Report (PMC 1977) and 15 were documented in the Walker Branch Watershed study (Anderson and Shugart 1977). It occurred at relatively high densities (10 to 20 pairs/40 ha) in mixed forests in Kroodsma's 1977 through 1981 studies (Kroodsma 1984b). Of species with high PIF concern scores, the Wood Thrush was the most abundant during the PIF survey accounting for 6% percent of all individual birds and occurring at 41% of the points (6th most common species) in 1995, and 4% of all individuals at 33% of the points (8th most common) in 1996.

Loggerhead Shrike. Krumholz (1954) documented the Loggerhead Shrike in the White Oak Creek area, and Howell (1958) reported two birds in July, 1957, in the vicinity of ORNL facilities. All recent sightings of the shrike have been near Freel's Bend. Although one individual was documented there in August 1994, November 1995, and 24 April 1996, no evidence of nesting was discovered (Mitchell et al. 1996).

Yellow-throated Vireo. This vireo was reported by Krumholz (1954), and Howell (1958) reported 12 individuals at 11 stations in the White Oak Creek/Melton Branch area where large trees were near forest openings. At the time of the Anderson and Shugart (1974) study, forests in some areas of Walker Branch Watershed were more open than at present, and four Yellow-throated Vireos were observed. Kroodsma (1982) reported these vireos in his power line corridor studies from 1975 to 1978 at low densities (less than five pairs/km^2). At present, the combination of large, tall trees with open understory, openings, or woodland edges preferred by these vireos (Nicholson 1997) are not as common on the ORR as they were historically, and none were observed in the 1995 PIF survey. Five were observed at four points in 1996.

Blue-winged Warbler. Kroodsma (1998, personal communication) observed this warbler calling on territory near the intersection of Bear Creek Road and Highway 95 in the 1980s. It was recently documented in June 1995 and 1996 near East Fork

Poplar Creek in an area currently leased for industrial development about 2 to 3 miles from the previous known location (Knight 1997). It was present in 3 to 5 year old successional vegetation in areas of clear-cut loblolly pine stands previously killed by southern pine beetles. The site has scattered saplings, tree seedlings, grasses, and forbs. These warblers have not been reported from other areas of the ORR.

Prairie Warbler. This warbler has been common on the ORR in all quantitative surveys that have been conducted in suitable habitat (Howell 1958, PMC 1977, Anderson et al. 1977, Kroodsma 1982 Kroodsma 1984a). In Howell's 1957 survey, it was the sixth most common species with 99 individuals at 68 points (43%), though he considered only about a third of his survey area to be suitable habitat. Hardy (1991) also reported a Prairie Warbler in a mature loblolly pine plantation during the breeding season. About 20% of the ORR is currently suitable habitat, and in the recent PIF surveys, 28 birds (3%) were reported at 17 points (19%) in 1995 and 32 birds (2%) at 23 points (15%) in 1996.

Cerulean Warbler. This warbler was not reported by Krumholz, but two singing males were tentatively reported by Howell (1958) in the White Oak Creek/Melton Branch study area. They formerly nested on the Walker Branch Watershed, where nine were observed from May through July (Anderson and Shugart 1974). No evidence of nesting has been recorded for the ORR since the Walker Branch study. It was not observed at PIF points in 1995 or 1996, but five were observed on Walker Branch Watershed on 4 April 1996. It was not heard later in the breeding season on the Walker Branch site, so it is presumed that these were migrants. Two additional observations of this warbler were on 24 April 1996 in a 3 to 5 year-old regenerating clearcut loblolly pine forest near the floodplain of Poplar Creek.

Prothonotary Warbler. This warbler was first reported for the ORR in Krumholz (1954) in the White Oak Lake study area. It has been reported in small numbers in subsequent surveys of suitable habitat. Howell (1958) reported two near a pond in the Freel's bend area in early June, and one near the present location of Melton Hill Dam in early July. It was also reported during the breeding season in the Breeder Reactor Environmental Report (PMC 1977), and Kroodsma (1998, personal communication) observed nesting in the 1980s along East Fork Poplar Creek. Although it was not observed at PIF points in 1995 or 1996, birds were observed nesting on the ORR in three locations in 1996—near the mouth of White Oak Creek; in a beaver pond/embayment of Watt's Bar Reservoir near the K-25 facility (Knight 1997); and adjacent to a beaver pond near East Fork Poplar Creek.

Worm-eating Warbler. This warbler is somewhat uncommon on the ORR. It was first reported during the breeding season by Howell (1958), who observed two in the White Oak Creek/Melton Branch study area and three from additional locations along the ORR boundary road along the Clinch River, now mostly flooded by the Melton Hill Reservoir. One was noted on a transect in the Breeder Reactor Environmental Report (PMC 1977) and four were reported in the Walker Branch Watershed study (Anderson and Shugart 1977) during the breeding season. Kroodsma (1984b) reporting seeing only two pairs and several transients in interior forest during his 1977 to 1981 mid-May to mid-June surveys. None were noted during the 1995 PIF survey, but five were observed during the breeding season at five points in mature hardwood forest near Hembree Marsh in 1996.

Louisiana Waterthrush. This species was observed by Krumholz (1954) in the

White Oak Creek study area. Howell documented five in the same general area in 1957 (Howell 1958). The Louisiana Waterthrush was not observed in the Walker Branch Watershed study (Anderson and Shugart 1977) or at PIF points in 1995 or 1996. A pair was observed on Bear Creek in June 1996 and in June 1997.

Hooded Warbler. This warbler was not reported by Krumholz (1954), but Howell documented 24 birds at 23 of 157 sample points (15%) in both the valley and surrounding ridges of the White Oak Creek/Melton Valley study area. It was abundant in the Walker Branch study where 39 individuals were observed during the breeding season and five were documented during fall migration (Anderson and Shugart 1974). Kroodsma (1984b) reported it at fairly low densities (less than one to about five pairs/40 ha). Hardy (1991) found it to be one of the 10 most abundant breeding birds in mature loblolly pine plantations and one of the eight most abundant in white pine plantations. In 1995, 11 birds (1%) were documented at eight points (9%), and in 1996, 22 birds (1%) were documented at 20 points (13%).

Summer Tanager. Krumholz (1954) first documented this tanager on the ORR in the White Oak Lake study area, and Howell (1958) reported 24 birds at 23 points (15%) throughout his study area. It was one of the more abundant birds documented in the Breeder Reactor Environmental Report (PMC 1977) and 15 individuals were reported in the Walker Branch survey (Anderson and Shugart 1974). Kroodsma (1984b) reported it at very high densities (about 23 pairs/40 ha) along power line edges through forest, but at much lower densities (less than five pairs/40 ha) in interior forest. During the current surveys, five tanagers (< 1%) were documented at three points (3%) in 1995, and in 1996, 16 (< 1%) were observed at 10 points (6%).

Dickcissel. The Dickcissel is rare in east Tennessee. It is more common in west and central Tennessee where it is found in crop stubble, crop fields that have been abandoned for one- to six-years, or briary thickets adjacent to fields (Nicholson 1997). Several birds have been seen at Freel's Bend and one was documented in the 1996 survey. It had not previously been reported from the ORR.

Bachman's Sparrow. Bachman's Sparrow was reported by Krumholz (1954) in the White Oak Lake study area, and Howell (1955) documented nine birds at various locations on the ORR, including the vicinity of Freel's Bend. It was formerly present on the ORR in open grassy fields with young eastern red-cedars or pines, young pine plantations, and eastern red-cedar barrens, but has not been seen since two singing territorial males were documented in 1982 (Kroodsma 1987).

Field Sparrow. This sparrow has been abundant on the ORR in active and abandoned agricultural areas, right-of-way clearings, and timber salvage areas. It was first reported by Krumholz (1954) in the White Oak Lake study area, and Howell reported 95 birds at 56 sample points (36%) in the same general area. The Breeder Reactor Survey (PMC 1977) reported it to be among the 24 most common migrants, but only reported one each on transects during the breeding season and during winter. Anderson et al. (1977) reported that 35% of the birds observed on 61-m wide transmission-line corridors were Field Sparrows. Kroodsma (1982, 1984a) found it to be one of the five most commonly observed species on utility corridors during the breeding season, occurring at densities of more than 60 pairs/km^2. Hardy (1991) found it to be the sixth most common wintering species in white pine plantations, but found none wintering in loblolly plantations and none during the breeding season. During the current surveys, six birds (< 1%) were observed in 1995 at five points (5%), and 34 birds (2%) were observed at 25 points (16%) in 1996.

Grasshopper Sparrow. All sightings of this sparrow have been in the vicinity of Freel's Bend. It was first reported by Howell (1958), who observed six in fields that were part of the agricultural complex containing Freel's Bend. Recently identified nesting areas at Freel's Bend are in active hayfields where the mowing schedule has been modified to enhance nesting success (Mitchell 1996). Although Grasshopper Sparrows were observed near PIF points in 1995 and 1996, none were observed at the sample points included here.

Orchard Oriole. This oriole was first reported by Krumholz (1954) in the White Oak Lake study area, and Howell (1958) documented five at five points (3%) in his study area and one near the old boundary road now under waters of Melton Hill Reservoir east of Highway 95. Howell reported it nesting in trees along the river adjacent to fields, but not near smaller streams. The open orchards, pasture trees, and fence rows preferred by Orchard Oriole are not presently common on the ORR. It occurs at Freel's Bend, but none were reported in the 1995 data and only one was reported at one point (Freel's Bend) in 1996.

Additional historic records. The Krumholz (1954) list includes a number of species not currently reported from the ORR that we include here, but cannot verify. Two of these species are not uncommon in the Ridge and Valley in recent years, according to Spring Counts, Christmas Counts, and Season Reports in The Migrant; however, neither has been recorded on the ORR in recent years: Herring Gull and Virginia Rail. Other species that they reported are quite rare in this part of the Ridge and Valley, and there are no other reported sightings on the ORR: King Rail, Common Moorhen, Semipalmated Plover, Short-eared Owl, Saw-whet Owl, Bank Swallow, Black-capped Chickadee, Kirtland's Warbler, Tree Sparrow, and Vesper Sparrow. A Snow Goose was also observed in the Krumholz study area (W. Yambert, 1998, personal communication).

Additional species or summer occurrences of spring/fall migrants reported by Howell (1958) include the Horned Lark, a calling individual flying overhead in the study area in June; a juvenile Redstart in mid-July at the mouth of Poplar Creek; and on two occasions in June, Henslow's Sparrow, a singing male at one of the survey points in the White Oak Creek/Melton Branch study area.

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The Migrant, 68 (3): 94-95, 1997.

REPORT OF THE TENNESSEE BIRD RECORDS COMMITTEE

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This report describes actions taken by the Bird Records Committee of the Tennessee Ornithological Society from Fall 1995 through the Fall 1997. Committee members and alternates who served during this period were Kevin Calhoun, Don Davidson, Gilbert Foster, Mark Greene, Paul Hertzel, Linda Northrop, Chris Sloan, and Terry Witt.

The criteria for acceptance has remained the same. A species is placed on the Confirmed List based on (a) extant, verified specimen, photograph, or sound recording, each accompanied by written details, or (b) satisfactory written documentation of three independent observations of a species, or (3) satisfactory written documentation from three independent observers of the same bird. In the absence of evidence fitting one of those categories, a species is placed on the Provisional List based on one or two sight records with satisfactory written documentation. Acceptance to either list requires a unanimous vote of the committee. In this account, the committee reports 15 records of 12 species that were accepted and two records of two species that were not accepted. Only published records mentioned in seasonal summaries or articles of *The Migrant*, *American Birds*, or *Field Notes* (formerly, *Audubon Field Notes*) are cited in the text.

ACCEPTED RECORDS

Neotropic Cormorant (*Phalacrocorax olivaceous*): Written documentation and photographs of a single bird seen at Mud Lake, Lake County, on 19-20 June 1993 (*American Birds* 47:115/117, 1993) were accepted. Written documentation of a single bird seen at Mud Lake, Lake County on 30 June 1996 (*Field Notes* 51:68, 1997) was accepted. Written documentation of a single bird seen at TVA Lake at The EARTH Complex, Shelby County, on 11 August 1996 (*Field Notes* 51:68, 1997) was accepted. These become the first, second, and third state records, and the species has been placed on the Confirmed List.

Reddish Egret (*Egretta rufescens*): Photographs and written documentation of a single bird seen at Gallatin Steam Plant, Sumner County, on 23 August-6 September 1997 (*Migrant* 68:40-41, 1997) were accepted. This becomes the first state record and the species is placed on the Confirmed List.

Garganey (*Anas querquedula*): Written documentation and sketches of a single bird seen at The EARTH Complex, Shelby County, on 3 September 1994 (*Field Notes* 49:57, 1995) were accepted on second reading. This becomes the second record for the state, with the species previously on the Confirmed List.

Rufous-necked Stilt (*Calidris ruficollis*): Written documentation and drawings of a single bird seen at The EARTH Complex, Shelby County, on 7 August 1993 (*American Birds* 48:118, 1994) were accepted. Written documentation and sketches by multiple observers of a single bird seen at The EARTH Complex, Shelby County, on 8-21 October 1994 (*Field Notes* 49:58, 1995) were accepted. These become the first and second state records. Written documentation from more than three independent observers of the 1994 bird allow the species to be placed on the Confirmed List.

Curlew Sandpiper (*Calidris ferruginea*): Photographs and written documentation of a single bird seen at Highway 79W, Lake County, on 3-4 June 1996 (*Field Notes* 50:960, 1996; *Migrant* 68:46, 1997) clearly indicate this species. This becomes the first record for

the state and the photographs place the species on the Confirmed List.

Pomarine Jaeger (*Stercorarius pomarinus*): Written documentation of a single bird seen at Nickajack Lake, Marion County, on 6 October 1995 (*Field Notes* 50:53, 1996) was accepted. This becomes the third state record, with the species already on the Confirmed List.

California Gull (*Larus californicus*): Written documentation of one to two birds seen at Pickwick Dam, Hardin County on 13 January-24 February 1996 (*Field Notes* 50:180, 1996) was accepted. This becomes the first record for the state and the species is placed on the Provisional List.

Sabine's Gull (*Xerna sabini*): Written documentation of a flock of eight birds seen at Island 13, Lake County on 18 September 1995 (*Field Notes* 50:68, 1996; *Migrant* 68:50, 1997) was accepted. This becomes the second record for the state and the species remains on the Provisional List.

Ivory Gull (*Pagophila eburnea*): Photographs and written documentation of a single bird seen at Pickwick Dam, Hardin County, from 10-21 February 1996 (*Field Notes* 50:180, 1996) clearly indicate this species. This becomes the first record for the state, and the photographs place the species on the Confirmed List.

Black Skimmer (*Rynchops niger*): Photographs and written documentation of a single bird seen on the Tennessee River in Marion County, on 5 October 1995 (*Field Notes* 50:53, 1996) clearly indicate this species. This becomes the second record for the state with the species already on the Confirmed List.

Kirtland's Warbler (*Dendroica kirtlandii*): Written documentation of a single bird seen at Eastern State Wildlife Management Area, Knox County, on 13 May 1997 (*Migrant* 68:42-43, 1997) was accepted. This becomes the second record for the state and the species remains on the Provisional List.

Shiny Cowbird (*Molothrus bonariensis*): Photographs and written documentation of a single bird seen at President's Island, Shelby County, on 6-10 July 1995 (*Field Notes* 49:939, 1995; *Migrant* 68:47, 1997) were accepted. This becomes the first record for the state, and the photographs place the species on the Confirmed List.

RECORDS NOT ACCEPTED

White-faced Ibis (*Plegadis chihi*): Written documentation of a single bird seen at Shelby Farms, Shelby County, on 23 April 1995 was not accepted (0-5 vote) due to insufficient details to separate from Glossy Ibis (*Plegadis falcinellus*).

Ferruginous Duck (*Aythya nyroca*): Written documentation and details of a single bird seen at Shelby Farms, Shelby County, on 16 June-4 July 1995 (*Field Notes* 49:940, 1995) was not accepted (1-4 vote). Committee members felt that since there were no other North American records for this species, and since this species is not known to be a long distance vagrant, the bird in question was almost certainly a domestic escapee.

OBSERVERS

Observers who submitted documentation and/or photographs to the committee were Clyde D. Blum, Carolyn H. Bullock, Kevin A. Calhoon, William G. Criswell, Francis C. Fekel, Joe Francis, Murray L. Gardler, Mark A. Greene, Roland W. Kays, Gene C. Knight, Shannon Knight, J. Anthony Koella, Steve W. McConnell, Robert W. Peeples, Ernest J. Restivo, Tommie L. Rogers, Terrence Schiefer, Christopher E. Skelton, Christopher A. Sloan, Martha G. Waldron, Jeff R. Wilson, and Elizabeth A. Wolfe. The committee wishes to thank these people for their contributions and cooperation.

The Migrant, 68 (3): 96, 1997.

LOIS M. HERNDON
(1906-1998)

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Lois McCulloch Herndon, 92, a prominent member of the Tennessee Ornithological Society, died Tuesday, Feb. 10, 1998, at Transylvania Community Hospital, Brevard, North Carolina, following a brief illness. She was buried at Elizabethton, Tennessee. She had made her home with a daughter at Pisgah Forest, North Carolina, since late 1997. She was the widow of Dr. Lee R. Herndon and the last surviving charter member of the Lee R. Herndon Chapter of TOS at Elizabethton. She was a member of the club for the past 55 years. In 1990 Lois Herndon was honored as one of the original group of 10 persons presented the Tennessee Ornithological Society Distinguished Service Awards (*Migrant* 61:110, 1990).

Lois was born at Warren, Indiana and later moved to Alabama. An excellent student, she graduated from high school as valedictorian of her class. She attended Maryville College near Knoxville, TN and graduated magna cum laude. A year after graduation she married Lee R. Herndon. For 17 years they lived in Buffalo, NY where they were actively involved in the study of bird life as members of a bird club. In February 1944, the Herndon's moved to Elizabethton. That same month they held a meeting in their home to discuss the formation of a Bird Life Study Club. The club was organized on March 3, 1944. The Herndons provided the motivating force in organizing TOS chapters at Elizabethton, Bristol, Greeneville and Kingsport. Dr. Lee Herndon was TOS President from 1946-1949 and served as editor of *The Migrant* from 1956-1971, a longer term than any other editor before or since. During this period, Lois supported much of her husband's work. She also participated in and supported many state and local TOS activities, especially those of the Lee R. Herndon Chapter of the TOS at Elizabethton. She is survived by one daughter, four sons, 29 grandchildren and 24 great-grandchildren.

The Migrant, 68 (3): 97-104, 1997.

1997 RESULTS OF THE NORTH AMERICAN MIGRATION COUNT IN TENNESSEE

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This year represents the first time that *The Migrant* has reported the results of North American Migration Counts, one-day county-wide surveys taken as part of International Migratory Bird Day. On May 10, 1997, 127 observers surveyed in 13 counties and recorded a total of 197 species. The day was generally cool and sunny all across the state, with moderate winds and temperatures ranging from 40 to 75 F. The highest number of species were recorded in Hamilton County with 150 (30 observers), followed by Shelby County with 139 (23 observers) and Cheatham County with 136 (only three observers). A few late over-wintering species were still to be found, including American Tree Sparrow, Fox Sparrow, and Purple Finch (all three in Wilson Co); Red-breasted Nuthatch (Blount Co); and Yellow-bellied Sapsucker (Jefferson Co). Unusual waterfowl and waders included Ross' Goose (Davidson), Willet (Hamilton), White-rumped Sandpiper (Anderson), Upland Sandpiper (Jefferson), and Black-bellied Plover, and Stilt Sandpiper (Shelby). Forster's Tern turned up in Cheatham County. The Olive-sided Flycatcher was observed in Davidson County, and Least Flycatchers, in both Hamilton and Blount Counties. Cheatham County recorded both a Sedge Wren and a Mourning Warbler, while Swainson's Warbler was observed in both Shelby and Sevier counties.

OBSERVERS & CONDITIONS

Anderson County — Weather was cool early, then clear and windy. Observers: Betty Reid Campbell, Jim Campbell, Tony Headrick, Ron Hoff (state compiler), Joel Keebler, Dollyann Myers, and Boyd Sharp.

Blount County — Weather was clear and cool. Observers: Jean Alexander, Tom Howe, David Johnson, Tony Koella, and David Trently. Four miles by bike during count.

Cheatham County — Weather was clear. Observers not listed.

Davidson County — Weather was clear. Observers not listed.

Hamilton County — 48 miles and 7 hours spent owling. Observers not listed.

Jefferson County — Weather was sunny and windy. Observers: K. Dean Edwards, Laurel Wyatt, and Pete Wyatt.

Knox County — Weather was cool early, then clear and windy. Observers: Ellen Bean, Beth Buckles, Bob Collier, Jerry Hadder, Joel Keebler, Ellen Kilbourne, Steve Kraus, Edith Moseley, Laurie Pearl, Ann Stodola, Paul Stodola, and Sam Tipton.

Roane County — Weather was clear and windy. 1.5 hours owling. Observers: J.Dev.Joslin and Linda Mann.

Sevier County — Weather was clear and cool. Observers: Ivan Cordrey, Susan Ford, Susan Hoyle, Tony Koella, Martha Rudolph, and Craig Walker.

Shelby County — Weather was breezy; cloudy early, then clear. Observers not listed.

Sumner County — Weather was clear. Observers not listed.

Williamson County — Weather was clear. Observers not listed.

Wilson County — Weather was breezy and sunny. Observers: Charles Berry, Earline Berry, Frank Crawford, Brian Green, Kay Norris, Larry Norris, Frank Ribble, Peg Ribble, Ramona See, Sara Thompson, and Roy Turrentine.

Tennessee International Migratory Bird Day Count — May 10, 1997

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Common Loon	-	-	1	-	-	-	-	-	-	-	1	-	-	2
Pied-billed Grebe	-	-	-	1	3	1	-	-	-	-	-	-	-	7
Double-crested Cormorant	-	-	-	-	-	-	1	13	-	2	88	-	20	124
Great Blue Heron	29	2	5	5	104	26	78	12	4	5	53	2	5	330
Great Egret	-	-	-	-	-	-	-	-	-	1	11	-	-	12
Cattle Egret	-	-	3	-	1	-	-	-	-	1	33	-	-	38
Green Heron	3	2	3	3	11	1	-	1	1	6	-	-	1	32
Black-crowned Night-Heron	-	-	12	3	-	16	26	-	-	-	70	-	3	164
Yellow-crowned Night-Heron	-	-	2	-	-	-	-	-	-	5	-	-	-	7
Ross' Goose	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Snow Goose	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Canada Goose	70	67	25	24	282	27	3	15	4	60	40	2	17	636
Wood Duck	16	35	17		45	4	14	-	7	6	4	3	14	173
Mallard	5	10	15	19	65	21	7	6	3	96	-	-	8	255
Blue-winged Teal	-	1	7	-	10	24	-	-	-	49	1	-	-	92
Northern Shoveler	-	-	-	-	9	-	-	-	-	-	-	-	-	9
Ring-necked Duck	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Lesser Scaup	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Red-breasted Merganser	-	-	-	-	3	-	-	-	-	-	-	-	-	3
Black Vulture	1	2	16	17	17	61	1	34	1	-	-	6	2	182
Turkey Vulture	33	18	37	24	75	53	4	2	14	3	3	5	20	291
Osprey	-	-	-	-	1	1	1	3	-	-	-	-	3	9
Mississippi Kite	-	-	-	-	-	-	-	-	-	21	-	-	-	21
Bald Eagle	-	-	1	-	1	-	-	-	-	-	-	-	-	2
Sharp-shinned Hawk	-	1	-	-	3	-	-	-	-	-	-	-	1	5
Cooper's Hawk	-	-	-	-	3	-	-	-	-	-	-	-	1	4
Accipiter species	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Red-shouldered Hawk	6	1	4	3	18	-	3	1	-	-	2	-	1	39
Broad-winged Hawk	3	1	1	1	7	-	3	-	-	2	-	1	1	20
Red-tailed Hawk	7	3	6	8	29	6	8	1	1	7	1	2	9	88

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
American Kestrel	2	-	6	3	3	1	-	-	-	2	1	1	3	22
Peregrine Falcon	-	-	-	-	1	1	-	-	2	-	-	-	-	4
Wild Turkey	1	1	5	2	6	-	-	1	-	1	-	1	-	18
Northern Bobwhite	3	-	14	12	39	2	1	5	1	30	-	-	2	109
Sora	-	-	-	-	9	1	-	-	-	-	-	-	-	10
Common Moorhen	1	-	-	-	-	-	-	-	-	-	-	-	-	1
American Coot	7	1	-	-	1	7	-	1	-	7	13	-	10	47
Black-bellied Plover	-	-	-	-	-	-	-	-	-	4	-	-	-	4
Semipalmated Plover	2	-	-	-	1	-	-	-	-	7	-	-	-	10
Killdeer	6	3	7	19	44	8	10		15	28	7	4	11	171
Black-necked Stilt	-	-	-	-	-	-	-	-	-	25	-	-	-	25
Greater Yellowlegs	-	-	1	-	-	5	-	-	-	1	-	-	-	7
Lesser Yellowlegs	-	-	1	-	2	2	-	-	1	25	-	-	-	31
Solitary Sandpiper	2	1	4	2	3	15	1	-	1	10	2	1	-	42
Willet	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Spotted Sandpiper	4	1	2	1	5	-	-	-	-	7	4	-	2	26
Upland Sandpiper	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Semipalmated Sandpiper	-	-	-	-	1	-	-	12	-	12	-	-	-	25
Western Sandpiper	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Least Sandpiper	7	-	2	-	8	1	-	1	-	124	-	-	-	143
White-rumped Sandpiper	1	-	-	-	-	-	-	-	-	2	-	-	-	3
Pectoral Sandpiper	-	-	-	-	-	-	-	-	1	91	-	-	-	92
Stilt Sandpiper	-	-	-	-	-	-	-	-	-	3	-	-	-	3
Dowitcher sp.	-	-	-	-	-	-	-	-	-	5	-	-	-	5
Common Snipe	-	-	-	-	2	1	-	-	-	-	-	-	-	3
American Woodcock	-	-	-	-	-	-	-	1	-	-	-	1	-	2
Bonaparte's Gull	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Ring-billed Gull	1	-	-	-	14	-	-	1	3	14	24	-	1	58
Caspian Tern	-	-	-	-	-	1	-	3	-	-	-	-	-	4
Common Tern	-	-	-	-	-	18	-	-	-	-	-	-	-	18

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Forster's Tern	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Rock Dove	16	1	16	62	76	17	39	2	10	34	16	8	4	301
Mourning Dove	91	39	12	47	181	29	51	8	28	65	1	22	28	602
Black-billed Cuckoo	-	-	-	2	1	-	2	-	-	-	-	-	-	5
Yellow-billed Cuckoo	3	4	2	9	8	2	2	-	-	2	-	1	2	35
Eastern Screech Owl	1	1	2	-	4	1	-	-	-	-	-	-	-	9
Great Horned Owl	-	1	6	-	3	-	-	-	-	-	-	-	1	11
Barred Owl	5	2	7	1	2	-	-	1	-	1	-	4	-	23
Common Nighthawk	1	2	4	1	2	1	-	-	-	17	-	-	1	29
Chuck-will's-widow	-	-	5	-	10	-	-	4	-	-	-	-	2	21
Whip-poor-will	-	1	21	-	53	-	-	2	-	-	-	-	-	77
Chimney Swift	62	59	20	153	300	139	88	9	32	72	7	17	36	994
Ruby-throated Hummingbird	4	-	7	2	9	-	1	2	1	3	-	2	3	38
Belted Kingfisher	1	3	3	7	9	2	3	1	3	1	-	-	-	33
Red-headed Woodpecker	-	-	-	1	3	-	-	-	-	6	-	-	2	12
Red-bellied Woodpecker	20	12	8	48	73	4	10	13	10	29	1	13	10	251
Yellow-bellied Sapsucker	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Downy Woodpecker	2	6	3	25	39	2	5	4	5	25	2	6	11	135
Hairy Woodpecker	1	2	1	3	5	-	-	1	1	1	-	-	-	15
Northern Flicker	5	7	4	6	21	4	4	2	1	11	-	-	2	67
Pileated Woodpecker	7	8	3	7	14	3	4	5	6	9	1	4	1	72
Olive-sided Flycatcher	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Eastern Wood-pewee	2	4	9	33	24	-	15	1	-	27	-	6	1	122
Acadian Flycatcher	2	8	3	7	6	-	-	-	7	-	-	14	-	47
Least Flycatcher	-	1	-	-	1	-	-	-	-	-	-	-	-	2
Eastern Phoebe	11	11	4	21	17	6	-	7	4	1	-	4	5	91
Great Crested Flycatcher	9	4	7	13	65	-	2	3	2	11	-	5	2	123
Eastern Kingbird	17	4	15	25	75	13	7	2	15	39	6	6	36	260
Horned Lark	-	-	-	-	-	-	-	-	-	21	-	-	-	21
Purple Martin	46	-	19	9	74	38	-	5	-	51	15	3	47	307

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Tree Swallow	24	-	4	-	8	6	1	4	5	1	-	-	5	58
Northern Rough-winged Swallow	31	7	25	37	141	22	39	10	32	19	20	-	23	406
Bank Swallow	100	-	1	-	3	38	-	-	-	-	-	-	-	142
Cliff Swallow	380	-	570	-	313	80	-	33	-	-	-	25	-	1401
Barn Swallow	151	42	35	34	281	78	42	9	58	82	10	9	49	880
Blue Jay	16	27	12	70	144	19	66	10	8	59	3	6	36	476
American Crow	107	61	17	28	293	27	35	24	35	28	21	16	36	728
Fish Crow	-	-	-	-	-	-	-	-	-	6	-	-	-	6
Common Raven	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Carolina Chickadee	20	40	12	98	193	11	84	24	12	38	13	16	18	579
Tufted Titmouse	47	34	8	74	164	7	50	19	14	31	6	15	20	489
Red-breasted Nuthatch	-	1	-	-	-	-	-	-	-	-	-	-	-	1
White-breasted Nuthatch	5	6	5	16	23	-	4	2	2	1	-	5	1	70
Brown-headed Nuthatch	-	-	-	-	17	-	-	1	-	-	-	-	-	18
Carolina Wren	25	23	6	33	90	3	20	14	9	53	12	10	8	306
House Wren	-	-	2	2	1	-	3	1	-	-	4	-	2	15
Winter Wren	-	-	-	-	-	-	-	-	4	-	-	-	-	4
Sedge Wren	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Marsh Wren	-	-	1	-	1	-	-	-	-	-	-	-	-	2
Golden-crowned Kinglet	-	-	-	1	-	-	3	-	1	-	-	-	-	5
Ruby-crowned Kinglet	-	-	-	-	1	-	5	-	-	1	-	-	-	7
Blue-gray Gnatcatcher	28	24	25	56	133	2	12	12	25	40	2	33	13	405
Eastern Bluebird	66	12	27	41	200	8	5	10	32	12	4	19	34	470
Veery	1	-	-	5	6	-	3	-	-	-	-	1	1	17
Gray-cheeked Thrush	-	-	2	6	4	-	1	-	-	1	-	3	-	17
Swainson's Thrush	8	3	7	54	57	-	20	9	1	71	-	12	-	242
Wood Thrush	17	34	10	14	33	-	9	17	23	24	-	10	2	193
American Robin	144	83	18	153	283	36	119	11	51	110	5	2	7	1022
Gray Catbird	5	13	6	10	21	2	15	2	2	24	6	1	5	112
Northern Mockingbird	29	7	15	22	124	9	55	9	4	50	-	4	31	359

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Brown Thrasher	15	12	9	20	83	8	19	3	3	18	4	11	13	219
Cedar Waxwing	8	1	-	19	85	-	15	-	-	20	-		-	148
Loggerhead Shrike	-	-	2	2	1	1	-	-	-	2	-	1	1	10
European Starling	262	80	41	271	486	187	121	18	80	98	65	39	167	1895
White-eyed Vireo	6	11	19	21	49	-	1	11	-	22	-	10	1	151
Blue-headed Vireo	-	1	-	2	3	1	-	-	5	-	1	-	1	14
Yellow-throated Vireo	3	1	1	8	7	-	-	1	1	9	-	1	-	32
Warbling Vireo	1	-	5	5	-	-	-	-	-	3	-	-	-	14
Philadelphia Vireo	-	-	-	9	1	-	1	-	-	2	-	-	-	13
Red-eyed Vireo	58	65	22	50	208	1	19	22	85	35	2	6	3	576
Blue-winged Warbler	-	-	4	5	1	-	-	5	-	-	-	1	-	16
Golden-winged Warbler	3	-	1	-	1	-	-	-	-	-	-	-	-	5
Tennessee Warbler	5	2	10	66	23	-	-	6	-	205	-	-	-	317
Orange-crowned Warbler	-	-	-	-	-	-	1	1	-	1	-	-	-	3
Nashville Warbler	-	1	5	11	1	-	2	1	-	2	-	2	-	25
Northern Parula	-	4	3	5	6	-	2	1	9	13	-	4	-	47
Yellow Warbler	2	3	13	12	7	4	3	3	1	6	-	4	3	61
Chestnut-sided Warbler	2	2	5	39	29	-	3	-	1	7	-	-	-	88
Magnolia Warbler	1	11	7	32	20	-	11	4	1	10	-	2	2	101
Cape May Warbler	2	2	3	7	7	-	-	-	2	2	-	-	-	25
Black-throated Blue Warbler	1	-	-	-	1	-	3	1	18	-	-	-	-	24
Yellow-rumped Warbler	1	12	8	21	12	1	23	4	1	10	1	-	2	96
Black-throated Green Warbler	9	11	4	11	12	-	8	1	23	1	-	-	-	80
Blackburnian Warbler	1	-	3	3	3	-	3	-	-	1	-	-	-	14
Yellow-throated Warbler	9	10	7	3	5	1	-	5	11	2	-	4	-	57
Pine Warbler	4	1	5	-	29	1	1	1	3	14	-	-	-	59
Prairie Warbler	2	1	12	1	71	1	2	13	-	2	-	3	1	109
Palm Warbler	3	1	21	20	16	-	3	-	-	3	1	1	-	69
Bay-breasted Warbler	1	1	3	46	6	-	2	-	-	20	-	-	-	79
Blackpoll Warbler	6	8	10	43	23	-	1	-	-	59	1	-	1	152

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roane	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Cerulean Warbler	12	-	2	6	7	-	-	-	1	1	-	-	-	29
Black-and-white Warbler	5	3	7	10	12	-	4	-	5	6	-	1	-	53
American Redstart	11	4	1	14	12	-	4	3	2	16	-	-	-	67
Prothonotary Warbler	1	1	5	4	2	-	1	-	-	3	-	-	2	19
Worm-eating Warbler	2	1	3	3	1	-	1	4	2	1	-	4	-	22
Swainson's Warbler	-	-	-	-	-	-	-	-	1	1	-	-	-	2
Ovenbird	8	13	5	7	9	-	8	4	25	7	-	1	-	87
Northern Waterthrush	-	7	2	2	9	-	-	-	1	-	-	-	-	21
Louisiana Waterthrush	2	8	2	6	8	3	-	3	5	1	-	6	1	45
Kentucky Warbler	8	2	6	7	11	-	-	1	2	17	-	5	-	59
Mourning Warbler	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Common Yellowthroat	11	13	19	25	64	1	11	15	5	46	-	6	7	223
Hooded Warbler	14	8	10	7	6	-	5	8	7	1	-	-	-	65
Wilson's Warbler	-	3	1	3	-	-	-	-	-	-	-	-	-	7
Canada Warbler	-	1	-	3	7	-	-	-	3	2	-	-	-	16
Yellow-breasted Chat	14	9	15	15	73	2	3	14	1	8	-	5	2	161
Summer Tanager	32	5	12	18	12	-	1	3	3	41	-	4	6	137
Scarlet Tanager	22	3	9	23	48	-	8	4	11	6	-	2	1	137
Northern Cardinal	49	50	26	147	318	18	108	29	40	100	11	28	41	965
Rose-breasted Grosbeak	7	4	10	24	20	-	4	-	1	13	-	2	-	85
Blue Grosbeak	1	-	2	1	9	1	-	-	-	5	-	3	-	22
Indigo Bunting	75	65	46	146	223	9	25	20	36	145	3	21	24	838
Painted Bunting	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Dickcissel	-	-	-	-	-	-	-	-	-	31	-	-	1	32
Eastern Towhee	15	22	18	24	146	3	22	18	3	23	11	6	7	318
American Tree Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Chipping Sparrow	14	18	22	10	60	1	1	2	3	3	-	14	10	158
Field Sparrow	20	22	12	59	84	7	1	13	6	7	2	7	23	263
Savannah Sparrow	2	-	8	-	11	3	3	3	-	10	-	-	-	40
Grasshopper Sparrow	-	-	-	-	-	-	-	2	-	2	-	-	-	4

Tennessee International Migratory Bird Day Count — May 10, 1997

Species *Counties:*	Anders	Blount	Cheat	Dvdson	Hmlt	Jeffers	Knox	Roan	Sevier	Shelby	Sumner	Wmson	Wilson	Totals
Fox Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Song Sparrow	54	34	1	1	137	15	54	16	51	5	2	2	1	373
Lincoln's Sparrow	-	-	1	-	1	-	-	-	-	1	-	-	-	3
Swamp Sparrow	-	-	9	-	6	-	6	2	-	-	-	-	-	8
White-throated Sparrow	-	1	2	2	7	-	15	5	-	5	-	-	-	37
White-crowned Sparrow	-	-	1	-	-	4	-	-	-	4	-	-	-	9
Dark-eyed Junco	-	-	-	-	-	-	-	-	8	-	-	-	-	8
Bobolink	1	-	3	-	36	-	-	-	-	192	-	-	-	232
Red-winged Blackbird	84	38	85	36	252	62	13	10	105	133	7	8	48	881
Eastern Meadowlark	36	29	28	14	102	23	9	5	26	31	-	11	24	338
Common Grackle	70	63	17	135	289	127	70	43	55	129	70	40	51	1159
Brown-headed Cowbird	20	11	36	68	61	14	16	3	12	66	3	17	56	383
Orchard Oriole	2	3	5	9	16	1	2	3	1	7	1	2	8	60
Baltimore Oriole	-	2	1	4	9	-	1	1	-	24	-	1	-	43
Purple Finch	-	-	-	-	-	-	-	-	-	-	-	-	2	2
House Finch	11	8	6	28	86	14	46	5	9	24	6	4	9	256
American Goldfinch	38	51	24	91	192	15	12	14	38	25	5	28	28	561
House Sparrow	2	7	5	9	83	8	38	4	19	30	3	4	3	215
Total individuals	2768	1497	1880	3088	8063	1454	1721	774	1234	3483	713	632	1199	28506
Total species/county	115	96	136	123	150	87	100	105	94	139	58	84	92	197
Party Hours	26.15	22.7	-	-	131	15.5	30.7	12	16.3	55	4.5	6	-	319.85
Observers - Parties	7-3	5-4	3-obs	22-obs.	30-obs.	3-2	12-5	2-2	6-3	23-8	3-obs.	1-1	11-obs	127-obs.
Miles driven	270	53.2	-	-	647	77	43	70	63.5	48	-	-	-	1271.7
Miles by foot	5.5	8.75	-	-	31	5	11.5	7	6.5	10	-	-	-	85.25
Temperature (deg F)	40-64	-	45-70	45-75	-	50-70	40-65	40-75	45-60	52-73	-	45-73	40-70	
Hours	0430-2200	0500-2100	-	0600-1800	-	0700-2000	0700-2000	0600-2000	0750-1930	0600-1945	-	-	0700-2000	

The Migrant, 68 (3): 105-115, 1997.

THE SEASON

RICHARD L. KNIGHT, Editor

SPRING: 1 MARCH - 31 MAY 1997

The 1997 spring season began very mild, then turned cool, with generally above normal rainfall. March temperatures continued the mild trend from winter. As a result, migration got off to a quick start. Record early arrival of migrants, mostly in March, occurred in all regions: three species in the Western Coastal Plain, six species (plus a tie) in the Highland Rim and Basin, and two species each in the Cumberland Plateau/Ridge and Valley and Eastern Mountain regions. A very cool April stalled much of the migratory flight. May generally continued cool, but migration proceeded, no doubt pressed by the urgency of the approaching breeding season. Late arrival may have led to some migrants departing on record late dates: five species each in the two westernmost regions and one species in the Eastern Mountains.

Several rare or unusual species were reported. These included White-faced Ibis and Ross' Goose in two regions each, as well as Cinnamon Teal and Western Kingbird in the West. Excellent shorebird numbers were noted, particularly in the Western Coastal Plain and Ridge and Valley. After a quick start, the warbler flight bogged down in April, then flowed strongly in May. Both *Vermivora* hybrids were reported, with the Brewster's found in two regions. Transient Swainson's Warblers were found in the Highland Rim and Basin region and the Ridge and Valley region at sites where they don't breed; such encounters with migrant Swainson's are rare. Most noteworthy were the territorial pairs of Peregrine Falcons in the two eastern regions, where suspected breeding was later verified at both sites in June.

WESTERN COASTAL PLAIN REGION: The spring season was characterized by unseasonably cool temperatures and above average rainfall highlighted only by a smattering of unusual visitors and occasional late and early dates for a few migrants. Migration of the passerines peaked during the fourth week in April and the first week in May. This coincided with the peak of shorebird migration which began in early March with the Greater Yellowlegs.

The nesting Brown-headed Nuthatch in Hardin County was the first record for west Tennessee. The Brown Creeper nest at the Wolf WMA in Fayette County was of particular interest since this species was reported down river during the breeding seasons of 1986, 1987, and 1989. A pair of Blue-winged Teal with two young were reported at the EARTH Complex, a second nesting for Shelby County.

Eight Marbled Godwits in Lake County was a new high count for the state. A Cinnamon Teal was the sixth record for the state, while the usually rare Hudsonian

Godwit was recorded in Shelby, Dyer, and Lake Counties. The Scissor-tailed Flycatcher made its somewhat regular visit to Lake County, with another in Hardin County. The Western Kingbird, usually seen more often in the fall, was observed in late May on the Fayette County Foray weekend. This report does not include all of the species reported in west Tennessee, for more information about waterfowl and shorebirds, contact the regional compiler.

Grebe-Heron: **Horned Grebe:** 10 Mar-14 May (4 max) Lake Co (WGC); 24 Mar-26 Apr (5 max) Dyer Co (WGC). **Eared Grebe:** 20 Mar (1) Lake Co (WGC); 16/22 Apr (1) Dyer Co (WGC). **American White Pelican:** 5 Mar-8 Apr (96) Dyer Co (WGC); 5 Mar-EOP (565 max) Lake Co (WGC); 5 May (6) EARTH Complex (JAZ, LVZ); 13 Apr (225) Samburg, Obion Co (WGC). **Double-crested Cormorant:** 10 Mar (1000+) Samburg, Obion Co (WGC). **Anhinga:** 10/29 May (1) Heloise, Dyer Co (WGC). **American Bittern:** 29 Mar (2) sw Shelby Co (MAG, JRW); 13 Apr (2) Long Point, Reelfoot (WGC); 25 Apr (1) Black Bayou WMA (FJA, PoR, TWRA); 28 Apr (1) Whites Lake WMA (WGC). **Least Bittern:** 26 May (1) Fayette Co Foray (SNM); 26 May (1) Reelfoot L, Obion Co (MAG). **Great Egret:** 22 Apr (96) Heloise, Dyer Co (WGC), max. **Snowy Egret:** 22 Apr (172) Heloise, Dyer Co (WGC), max. **Tricolored Heron:** 5-11 May (1 ad) Whites Lake WMA (WGC). **Yellow-crowned Night-Heron:** 12-26 Apr (8 ad, 8 nests) Memphis (LCC, MaH); 25 May (7) downtown Memphis (GRP, JBP); 10 May (2) Whites Lake WMA (MAG, JRW); 10 May (5) Shelby Co (MTOS); 25 May (1) Wolf WMA (RBF); 28 May (7-8 nests, 1 yg) Memphis (CHB, SCF, SSL, VBR, BHW). **Black-crowned Night-Heron:** 28 Apr/19 May (4) Whites Lake WMA (WGC); 3 May (7) Reelfoot L, Lake Co (Frank Bills, Sharon Bostick, Laurie Pearl); 5-26 May (2 ad) Lake Co (WGC); 30 May (1 ad) sw Lake Co (WRP).

Goose-Sora: **Ross' Goose:** 2 Mar (3) Dyer Co (WGC); 10-16 Mar (4 max) Lake Co (WGC). **Blue-winged Teal:** 5 May (2 ad, 2 yg) EARTH Complex (CHB, VBR, MGW). **CINNAMON TEAL:** 29 Mar/12 Apr (1 m) Dyer Co (WGC). **Greater Scaup:** 15-24 Mar (3 max) Lake Co (WGC); 19-29 Mar (5 max) Dyer Co (WGC). **Red-breasted Merganser:** 15 Mar (9) nw Memphis (LCC, MaH); 24 Mar-20 May (4 max) Lake Co (WGC); 24 Mar-14 May (4 max) Dyer Co (WGC). **Osprey:** 15 Mar/13 Apr (2 nests) Obion Co (WGC). **Mississippi Kite:** reported from all areas of Shelby Co; 4 May (1) Oakland, Fayette Co (DaG, TMG); 29 May (50) Dyer Co (WGC). **Bald Eagle:** 5 Mar/6 May (on nest/one yg) #9 Lake, KY (WGC); 10 Mar /13 Apr (on nest) Lake Isom NWR, Lake Co (WGC). **Peregrine Falcon:** 26 Apr/20 May (1ad/1 im) Whites Lake WMA (WAG); 30 Apr (1) Humbolt, Gibson Co (MAG), first county record; 1-19 May (2) two locations, Lake Co (WGC). **King Rail:** 20 May (1) Black Bayou WMA (WGC).**Sora:** 29 Mar (2) Allen TVA, Memphis (MAG, JRW); 13 Apr (5) Long Point, Reelfoot L (WGC); 5 May (1) Whites Lake WMA (WGC); 18 May (1) EARTH Complex (CHB).

Shorebirds: **Black-bellied Plover:** reported in single digits in Shelby, Dyer and Lake Cos. **American Golden-Plover:** 20 Mar-5 May (40 max) Lake Co (FJA, WGC, PoR, TWRA); 24 Mar-2 May (1000+) Dyer Co (WGC); 29 May (1200+) EARTH Complex (MAG, JRW). **Black-necked Stilt:** 21 Mar-5 May (40 max) nw Shelby Co (LCC, MaH, PMK); 27 Mar-EOP (30) EARTH Complex; 25 Apr (1) Black Bayou WMA, (1) Anderson Tully WMA, Lauderdale Co (FJA, PoR, TWRA); 25 Apr (2) Eagle Lake WMA (VBR); 5 May (1) Whites Lake WMA (WGC). **WILLET:** 26 Apr (1) Shelby Farms (VBR, WRP); 26/27 Apr (19/1) EARTH Complex (JAZ, LVZ); 26 Apr (1) Eagle Lake WMA (MAG, David Sams, JRW); 1 May (24) Mud L, Lake Co (WGC); 6

May (1) Black Bayou WMA (WGC). **Ruddy Turnstone:** 20 May (7) Black Bayou WMA (WGC). **HUDSONIAN GODWIT:** 26 Apr (1) Eagle Lake WMA (MAG, David Sams, JRW*, JAZ, LVZ); 28 April/15 May (2/1) Whites Lake WMA, 11 May (1) Black Bayou WMA (WGC); 11 May (1) nw Shelby Co (PMK); 11/15 May (1) Black Bayou WMA, Mud L, Lake Co (WGC). **MARBLED GODWIT:** 30 Apr/1 May (8/1) Mud L, Lake Co (WGC), first spring date for west Tennessee and a high number for the state. **White-rumped Sandpiper:** 5-14 May (20 max) Whites Lake WMA (WGC); 5-29 May (10) Lake Co (WGC); 24 May (12) EARTH Complex (MAG, JRW). **Stilt Sandpiper:** 9 May (56) Mud L, Lake Co (WGC). ***Dowitcher sp.:*** 28 Apr (128 max) Black Bayou WMA (WGC); 28 Mar-14 May (8-50) Lake Co; 3 Apr-10 May (29 max) Dyer Co (WGC); 3 May (12) nw Shelby Co (LCC, MaH). **Short-billed Dowitcher:** 4 May (24) EARTH Complex (JAZ, LVZ); 10 May (12) Mud L, Lake Co (MAG, JRW). **Long-billed Dowitcher:** 8 Apr (15 +/-) Dyer Co (WGC); 26 Apr (3) Eagle Lake WMA (MAG, JRW); 10 May (4) Mud L, Lake Co (MAG, JRW). **Wilson's Phalarope:** 25 Apr (1) Anderson Tully, Lauderdale Co WMA, (FJA, PoR, TWRA); 28 Apr-11 May (53 max) Lake Co (WGC); 29 Apr-15 May (29 max) Dyer Co (WGC); 30 Apr (3) Shelby Farms (VBR); 3 May (2) nw Shelby Co (LCC, MaH); 5 May (40 max) EARTH Complex (JAZ, LVZ); 5 May (32) nw Shelby Co (PMK). **Red-necked Phalarope:** 15 May (1) Mud L, Lake Co (WGC).

Gull-Owl: **Franklin's Gull:** 1 May (1) Shelby Farms (JAZ, LVZ). **Bonaparte's Gull:** 2 Mar-29 Apr (30 max) Dyer Co (WGC); 19 Mar-2 Apr (100 max) Lake Co (WGC); 8-21 Mar (45 max) nw Memphis (LCC, MaH, LVZ). **Herring Gull:** 6/15 Mar (1/1) Lake Co (WGC); 28 Apr (2) Black Bayou WMA (WGC). **Lesser Black-backed Gull:** 15 Mar (1ad) Lake Co (WGC, JRW). **Forster's Tern:** 1/ 2 May (4) Lake Co (WGC); 10 May (12) Lake Co (MAG, JRW). **Least Tern:** 25 Apr (1) Shelby Farms (VBR), early state. **Caspian Tern:** 18 Apr (4) Hwy 70 at TN River, Benton Co (MAG); 22 Apr (4) Dyer Co; 22 Apr-29 May (34 max) Lake Co (WGC); 3 May (1) Shelby Forest SP, Shelby Co (WRP). **Common Tern:** 10 May (1) Lake Co (MAG, JRW). **Whip-poor-will:** 3 Apr (2 calling) e Memphis (Ernie Restivo). **SHORT-EARED OWL:** 24 May (1) Fayette Co Foray (DDP), late state.

Flycatcher-Creeper: **Eastern Wood-Pewee:** 27 Mar (1) e Memphis (GRP), early state. **Olive-sided Flycatcher:** 24 May (1) Fayette Co Foray (WRP, VBR); 26 May (1) Lake Co (MAG, JRW). **Yellow-bellied Flycatcher:** 26 May (3) three locations, Lake Co (MAG, JRW), responded to screech owl tape. **Least Flycatcher:** 3 May (1) Lake Co (Frank Bills, Sharon Bostick, Laurie Pearl); 6 May (1) Memphis (VBR); 10 May (1) Whites Lake WMA (MAG, JRW), responded to screech owl tape; 16 May (1) Shelby Farms (WRP); 17 May (1) Overton Park, Memphis (DDP, MTOS). **Eastern Kingbird:** 27 Mar (1) e Memphis (GRP), early west Tennessee. **WESTERN KING-BIRD:** 26 May-EOP (1) Fayette Co Foray (SNM, MGW), first county record. **SCIS-SOR-TAILED FLYCATCHER:** 3 May (1 m) Tiptonville, Lake Co (Frank Bills, Sharon Bostick, Laurie Pearl); 13-30 May (1) Shiloh N.P., Hardin Co (Kent Higgins). Horned Lark: 21 Mar (2 nests) nw Shelby Co (LCC, MaH). **Bank Swallow:** 28 May (20-60 nests) Presidents Island, Shelby Co (CHB, SCF, SSL, VBR, BHW); 6 May (20 active nests) Hwy 79w and Great River Rd., Dyer Co (WGC); 6 May (large colony, no count was made of number of active nests) Choctaw Transportation Co. (WGC). **Cliff Swallow:** 26 May (pr with nest) Kirby Pocket, Reelfoot L, Obion Co (MAG, JRW). **BROWN-HEADED NUTHATCH:** 9/16 May (1/ 2 ad, 3 fledglings) Pick-wick SP, Hardin Co (Steve McConnell, Jeff Garner/Mike Roedel), first occurrence

in west Tenn. **BROWN CREEPER:** 4 May (nest) Wolf WMA (Melinda Watson, Larry Smith) nesting status checked by RPF on 24 May 1997.

Vireo-Weaver: **Philadelphia Vireo:** 24 May (1) Fayette Co Foray (DDP), late west Tennessee. **Palm Warbler:** 15 May (1) Shelby Farms (CHB), late Shelby Co. **Blackpoll Warbler:** 10 May (51) Millington (DDP, DFP, GCP); 10 May (60) Reelfoot L, Obion/Lake Cos (MAG, JRW). **Cerulean Warbler:** 22 Apr (4) Overton Park, Memphis (GRP); 26 May (8) Wolf River between Oscow and Rossville, Fayette Co Foray (Cleo Mayfield, George Mayfield). **Connecticut Warbler:** 10 May (1) Walnut Log, Reelfoot L, Obion Co (MAG, JRW); 16 May (1) Shelby Farms (WRP). **Mourning Warbler:** 15 May (1) Shelby Farms (CHB, JAZ, LVZ). **Rose-breasted Grosbeak:** 24 May (1) Fayette Co Foray (DDP), late west Tennessee. **American Tree Sparrow:** 10 Mar (1) Lake Co (WGC). **Grasshopper Sparrow:** 6 May (1) Millington (DDP, DFP); 10 May (1) Black Bayou WMA (MAG, JRW); 10-28 May (2) Presidents Island, Shelby Co (CHB, SCF, VBR, SSL, JAZ, LVZ); 24 May (4) Fayette Co Foray (GRP, JBP, WRP, Forrest Priddy). **Song Sparrow:** 24 May (3) Fayette Co Foray, three locations (JAZ, LVZ). **Swamp Sparrow:** 16 May (1) Shelby Farms (CHB, WRP), late west Tennessee. **Dickcissel:** 21 Mar (1) Wolf WMA (NPM, Charles McCrary). **Bobolink:** 27 Apr-6 May (192 max) Millington (DDP, DFP, GCP); 5 May (10) Tipton Co (PMK); 10 May (100+) Lake Co (MAG, JRW); 6-11 May (60 max) Dyer Co (WGC); 30 May (30) Lake Co (WGC). **Western Meadowlark:** 29 Mar (1) EARTH Complex (MAG, JRW). **Pine Siskin:** 29 Apr-8 May (1) Oakland, Fayette Co (DaG, TMG). **House Sparrow:** 28 May (nesting in Cliff Swallow nest) Interstate 155W and Hwy 182, Dyer Co (WGC).

Locations: Black Bayou-in Lake Co; Eagle Lake WMA-in Shelby Co; EARTH Complex-in Shelby Co; Millington-in Shelby Co; Reelfoot L-in Lake and Obio Cos.; Shelby Farms-in Shelby Co; White's Lake WMA-in Dyer Co; Wolf WMA-in Fayette Co.

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HIGHLAND RIM AND BASIN REGION: For the three-month spring quarter, the weather was generally slightly cooler and wetter than average. March was warm and very wet with over 9.5 inches of rain. The following two months were about 5 degrees cooler than normal, with April being rather dry and May having a typical amount of precipitation. Large numbers of Neotropical migrants did not occur until the first week of May. Although technically in the spring quarter of the year, a "winter" bird survey was conducted on 1 March at Saturn Corporation's 2400 acre site in Spring Hill by birders from several TOS chapters. Eleven birders found a total of 1,096 individuals comprising 51 species. Perhaps the most interesting bird found during the Spring Hill survey was a Sedge Wren. Future periodic surveys are planned.

Loon-Hawk: **Common Loon:** 31 May (1) Old Hickory L (CAS). **Horned Grebe:** 4 Mar (5) Radnor L (HKC, JKS). **Double-crested Cormorant:** 25 Apr (1000) Old Hickory L (CAS). **Great Blue Heron:** 31 Mar (25, some nesting activity in rookery)/7 May (20, several with yg in nest) Old Hickory L (CAS). **Great Egret:** 21 Mar (1) Monsanto Ponds, Maury Co (JKS, MJW); 31 Mar (1, standing in rookery)/31 May (2, 1 standing in rookery) Old Hickory L (CAS); 18 Apr (1) Radnor L (MLM). **Snowy Egret:** 7 May (2) Old Hickory L (CAS). **Yellow-crowned Night-Heron:** 14 Apr (1) Richland Creek, Davidson Co (Scott Feinstein). **WHITE-FACED IBIS:** 1

May (1) near hwy US 64, Lawrence Co (Damien Simbeck), first middle Tenn. record. **Ross' Goose:** 10-19 Apr (1) Shelby Park L, Davidson Co (MSH et al.). **Red-breasted Merganser:** 7 Apr (23) Cheatham Co (VJS, Sabine Thompson); 31 May (1 m) Drake's Creek, Sumner Co (CAS), Nashville area late record. **Common Merganser:** 27 Apr (14) Cheatham Co (VJS). **Osprey:** 27 Apr (1) Radnor L (NTOS). **Northern Harrier:** 10 May (1) Putnam Co (fide SJS). **Broad-winged Hawk:** 1 Apr (1) Radnor L (FCF), building a nest. **Merlin:** 22 Mar (1) Shelby Bottoms, Davidson Co (PDC).

Turkey-Woodpecker: **Wild Turkey:** 20 Mar/22 May (1) Radnor L (Mike Carlton/MLM). **American Avocet:** 3 May (1 m) Old Hickory L, Davidson Co portion (CAS). **Greater Yellowlegs:** 27 Apr (1) Cheatham Co (VJS). **Willet:** 3 May (44) Rice Blvd., Murfreesboro, Ruth. Co (FCF); 3 May (15) Hwy 99, Ruth. Co (TJW, Richard & Wilma Hunter). **Long-billed Dowitcher:** 3 May (2) Old Hickory L, Davidson Co portion (CAS). **Bonaparte's Gull:** 14 Apr (140) Old Hickory Dam, Sumner Co (CAS); 30 May (1) Old Hickory Dam, Sumner Co (HKC, JKS), late. **Laughing Gull:** 3 May (2) Old Hickory L, Davidson Co portion (CAS). **Franklin's Gull:** 3 May (1) Old Hickory L, Davidson Co portion (CAS). **Herring Gull:** 18 Apr (1) Old Hickory L (CAS). **Caspian Tern:** 15 Apr (15) Old Hickory L (CAS). **Common Tern:** 3/7 May (1) Old Hickory L (CAS). **Black Tern:** 9 May (4) Radnor L (JoF). **Black-billed Cuckoo:** 3 May (2) Oaklands Mansion, Ruth. Co (TJW, David McCarroll); 7 May (1) Radnor L (NTOS); 9 May (1) Wilson Co (CAS). **Eastern Screech Owl:** 20 Apr (4 yg) Shelby Park, Nashville (Julia Tanner). **Yellow-bellied Sapsucker:** 10 May (1) Putnam Co (fide SJS), late.

Flycatcher-Vireo: **Olive-sided Flycatcher:** 17 May (1) Radnor L (NTOS); 30 May (1) Radnor L (PDC, FCF). **Eastern Wood-Pewee:** 3 Apr (1) Pennington Bend (MLM), Nashville area early record. **Least Flycatcher:** 2 May (3) Radnor L (JKS, CAS). **Bank Swallow:** 3 May (1000s) Old Hickory L (CAS); 10 May (4) Putnam Co (fide SJS); 31 May (1) Warren Co (SNM). **Winter Wren:** 24 Mar (1) Radnor L (MLM). **Sedge Wren:** 1 Mar (1) Spring Hill, Maury Co (Joel Keebler et al.). **Veery:** 21 Apr (1) Pennington Bend (MLM); 2 May (1) Radnor L (RHC, FCF); 10 May (2) Putnam Co (fide SJS). **Gray-cheeked Thrush:** 2 May (1) Radnor L (JKS, CAS); 5-19 May (1) Crieve Hall (JKS); 10 May (1) Putnam Co (fide SJS). **Cedar Waxwing:** 26 Apr (29)/31 May (34) Warren Co (SNM); 22 May (50) Nashville (MLM); 26 May (40) Crieve Hall (JKS). **Blue-headed Vireo:** 13 Mar (1) Putnam Co (SJS), new early arrival date for county; 11 Apr (1) Radnor L (MJW). **Yellow-throated Vireo:** 28 Mar (1) Radnor L (HKC), new Nashville area early arrival date. **Warbling Vireo:** 24 Apr (1) Radnor L (MLM). **Philadelphia Vireo:** 14 May (1) Radnor L (NTOS).

Warbler-Sparrow: **Golden-winged Warbler:** 25 Apr (1) Radnor L (CAS). **Lawrence's Warbler:** 1 May (1) Radnor L (PDC, Susan Marden), singing Blue-winged song. **Brewster's Warbler:** 14 May (1) Davidson Co (Jane DiPietro); 15 May (1) Nolensville, Ruth. Co (RHC). **Tennessee Warbler:** 28 May (1) Radnor L (MLM), 2 days past Nashville area late date. **Orange-crowned Warbler:** 21 Apr (1) Pennington Bend (MLM); 11 May (1) Crieve Hall (JKS), 1 day past Nashville area late date. **Nashville Warbler:** 26 May (1) Putnam Co (SJS), new late spring date for county and probably for state. **Northern Parula:** 28 Mar (1) Nashville (LVK), 3 days before Nashville area early date. **Chestnut-sided Warbler:** 16 Apr (1) Pennington Bend (MLM), tied Nashville area early date. **Cape May Warbler:** 7 May (1) Radnor L (NTOS). **Yellow-rumped Warbler:** 28 May (1) Crieve Hall (HKC), 4 days past Nashville area late date. **Yellow-throated Warbler:** 20 Mar (1) Radnor L (Gilbert Foster),

1 day before Nashville area early date. **American Redstart:** 28 Mar (1) Nashville (LVK), 4 days before Nashville area early date. **Swainson's Warbler:** 29 Apr (1, heard singing) Radnor L (PDC, FCF); 30 Apr (1, singing bird seen well) Oaklands Mansion, Ruth. Co (TJW), first county record; rare migrant. **Connecticut Warbler:** 2 May (1) Radnor L (JKS, CAS). **Mourning Warbler:** 15 May (1) Nolensville, Ruth. Co (RHC); 16 May (1) Radnor L (HKC, JoF). **Wilson's Warbler:** 10 May (2) Putnam Co (fide SJS). **Rose-breasted Grosbeak:** 2 Mar (1 f at feeder) Cheatham Co (VJS). **Blue Grosbeak:** 23 Apr (1) Radnor L (Layanne Welch). **Dickcissel:** 10 May (2) Putnam Co (fide SJS). **Grasshopper Sparrow:** 25/31 May (5/3) Warren Co (SNM).

Locations: Crieve Hall-in Nashville; Old Hickory L-in Sumner Co, unless otherwise indicated; Pennington Bend-in Nashville; Radnor L-in Nashville; Ruth. Co-Rutherford Co

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CUMBERLAND PLATEAU/RIDGE AND VALLEY: Following a mild winter, spring began mild through most of March. However, April and May had below average temperatures. Indeed, this was the coolest May on record in the Johnson City area. Rainfall averaged close to or slightly above normal each month, with a net surplus for the season.

With the mild conditions, early migration got off to a good start. Waterfowl seemed to depart early, although a few stragglers remained. The arrival of Tree Swallows marked an early record in the Northeast. The coolness of April delayed many of the migrants to follow. Although May was cool and wet, many migrants pushed through. An excellent shorebird flight was detected, an indication of the grounding effects of the unsettled weather. A continuous series of fronts from the Northwest apparently blew some shorebirds well east of their usual route. Most of the shorebirds occurred at small wetlands rather than at the TVA reservoirs, which were mostly full. Good numbers and a large variety of warblers were encountered in May. A White-faced Ibis was the first for the region. Certainly the highlight of the season was the pair of Peregrine Falcons showing signs of nesting at Chattanooga (also see the Mountain Region).

Grebe-Ibis: **Pied-billed Grebe:** 7 May (1) Aus Spr (RLK), lrs. **Horned Grebe:** 29 Apr (1) Aus Spr (RLK); 2 May (1) Rkn Bot (RLK), lrs. **Double-crested Cormorant:** 6 Apr (5)/11 May (8) Kingsport (JWC, LCM,/RLK); 11/26 Apr (1/4) Nol. Wat. Sct. (James Holt/ACL, DHM); 22 Apr (7) Aus Spr (RLK); 2 May (130+) Rkn Bot (RLK). **American Bittern:** 19 Apr-10 May (2) Bra Lev (KAC, m.ob.). **Great Blue Heron:** 6 Mar thru period (11 nests) Eagle Bend (JDJ). **Great Egret:** 26 Mar (1) Hmlt. Co (Ken Dubke); 4 Apr/10 May (1) Aus Spr (AJT/RLK); 22 Apr (1) Greene Co (ACL, DHM); 7-9 May (1) Boone L (TSM). **Snowy Egret:** 11 May (1) Wash. Co (RLK); 16 May (1) Tusculum (ACL, DHM). **Little Blue Heron:** 20 Apr (1 im) Bra Lev (TLR); 11 May (1 ad) Wash. Co (RLK). **Cattle Egret:** 19 Apr (1) Bra Lev (KAC). **Black-crowned Night-Heron:** 6 Apr (2) Kingsport (JWC, LCM); 22 Apr (3) Aus Spr (FJA); 26 Apr (4) Nol. Wat. Sct. (ACL, DHM). **Yellow-crowned Night-Heron:** 15 Apr (3) Knox Co (DJT); 18 Apr (1) Kingsport (fide FJA); 21 Apr (1) Hmlt. Co (Clyde Blum), ers there. **WHITE-FACED IBIS:** 19-20 Apr (1) Bra Lev (RJH, m.ob., photo), first regional report.

Goose-Coot: **Snow Goose:** 3 Apr (1 white-phase) Limestone (FJA); 3-5 Apr (1

white phase) Knox Co (DJT); both late. **Blue-winged Teal:** 26 Apr (74) Wash. Co (RLK, THF), max; 21 May (2) Tusculum (ACL, DHM), lrs; very good numbers throughout east Tenn. **Northern Shoveler:** 10 May (8) Bra Lev (RJH), lrs. **American Wigeon:** 3 May (1) Johnson City (FJA), lrs. **Ring-necked Duck:** 5 May (1) Aus Spr (RLK), lrs. **Greater Scaup:** 22-23 Mar (3) Johnson City (RLK); 26 Apr (1) Aus Spr (RLK, THP). **Red-breasted Merganser:** 1 May (1) Aus SPr (RLK), lrs. **Mississippi Kite:** 22 Apr (1) Aus Spr (AJT, FJA), second area record. **Bald Eagle:** 29 Apr (1 im) Aus Spr (RLK). **Cooper's Hawk:** nests at Johnson City (Jerry Nagel) & Aus Spr (RLK). **Merlin:** 23 Mar (1) Wash. Co (ARH, JWB); 17 Apr (1) Aus Spr (FJA); 22 Apr (1) Greenville (ACL, DHM). **Peregrine Falcon:** 31 Mar (1) Kingsport (Lisa Jones); 29 Apr (1) Greeneville (ACL, DHM); 9 Apr thru season (2) Chickamauga Dam, Hmlt. Co (Roi Shannon, m.ob.), breeding behavior observed. **Virginia Rail:** 20 Apr (1) Bra Lev (KAC, TLR, Carla Christensen); 5 May (1) Aus Spr (RLK). **Sora:** 9 Mar-10 May (1-8) Bra Lev (KAC, m.ob.); 5 Apr (2) Ktn. Stm. Pl. (DJT); 26 Apr-13 May (1-2) Aus Spr (RLK, FJA). **American Coot:** 12 May (3) Aus Spr (FJA), lrs.

Shorebird: **Semipalmated Plover:** 3-22 May (1-2) Tusculum (ACL, DHM); 12-15 May (1-2) Wash. Co (RLK). **Greater Yellowlegs:** 12 May (1) Tusculum (ACL, DHM), lrs. **Lesser Yellowlegs:** 1 May (18/15) Aus Spr/Tusculum (RLK/ACL, DHM), max; 17 May (4) Limestone (RLK), lrs. **Solitary Sandpiper:** 26 Apr (43) Wash.Co (RLK, THF), max; 21 May (1) Tusculum (ACL, DHM), lrs. **Willet:** 21-22 Apr (2) Bra Lev (TLR); 25 Apr (6) Boone L (RLK). **Upland Sandpiper:** 5 Apr (2) Ktn. Stm. Pl. (DJT); 3 May (1) Hmlt. Co (KAC, Daniel Jacobson). **Semipalmated Sandpiper:** 14-17 May/3 Jun (1-14/2) Wash.Co (RLK); 31 May (35) New Market (KDE), max. **Western Sandpiper:** 15 May (1) Wash.Co (RLK). **Least Sandpiper:** 15 May (80) Wash.Co (RLK), new local high count; 22 May (2) Tusculum (ACL, DHM), lrs. **White-rumped Sandpiper:** 2-10 May (1-3) Bra Lev (TLR, m.ob.); 8 May (1) Eagle Bend (JDJ); 15-17 May (7) Limestone (RLK); 16-22 May (1-6) Tusculum (ACL, DHM); 30-31 May (1-2) New Market (KDE); excellent showing. **Baird's Sandpiper:** 2-10 May (1-3) Bra Lev (TLR, m.ob.); 5 May (1) Wash. Co (RLK). **Pectoral Sandpiper:** 26 Apr (12) Tusculum (ACL, DHM), max. **Dunlin:** 2 Mar (1) Ktn. Stm. Pl. (DJT); 24 Mar/8 Apr (3/1) Eagle Bend (JDJ); 30-31 May (4) New Market (KDE). **Stilt Sandpiper:** 4 May (1) Tusculum (ACL, DHM). **Long-billed Dowitcher:** 29 Apr (1) Tusculum (ACL, DHM), identified by voice. **Short-billed Dowitcher:** 5 Apr (1) Knox Co (DJT); 1/18 May (4/1) Aus Spr (RLK). **Common Snipe:** 9 Mar (120+) Bra Lev (KAC), max. **American Woodcock:** 7 May (1) Sullivan Co (TSM). **Wilson's Phalarope:** 23-24 Apr (1) Bra Lev (TLR); 1 May (1) Tusculum (ACL, DHM).

Gull-Woodpecker: **Great Black-backed Gull:** 9 Mar (1) Chickamauga L, Hmlt. Co (KAC), in second-winter plumage. **Caspian Tern:** 7 May (1) Boone L. (TSM); 9 May (1) Nickajack Dam, Marion Co (KAC). **Forster's Tern:** 21 Apr/9 May (2 /7) Nickajack Dam, Marion Co (KAC). **Eurasian Collared-Dove:** 7 Mar (1) Chattanooga (TLR). **Black-billed Cuckoo:** 10 May (1) Hmlt. Co (Hayden Wilson, Bonnie Johnson); 13 May (1) Aus Spr (RLK); 13 May (1) Greeneville (ACL, DHM). **Barn Owl:** 9 May (1 dead yg) Johnson City (FJA). **Whip-poor-will:** 19 Mar (1) Tenn. River gorge, Marion Co (WGH), ers. **Red-headed Woodpecker:** 2 Mar (1) Greene Co (ACL, DHM); present at 4+ sites in Wash. Co (RLK, FJA).

Flycatcher-Vireo: **Olive-sided Flycatcher:** 3-4 May (1) Tenn. River gorge, Marion Co (TLR, m.ob.); 10 May (1) Hmlt. Co (WGH); 23 May (1) Johnson City (FJA). **Tree Swallow:** 6 Mar (5) Aus Spr (RLK), new local early date; 2 May (4 pr defending

cavities in snags) Rkn Bot (RLK); 13 May (occupied nest box) Dunlap, Sequatchie Co (Hayden Wilson); 6 occupied nest boxes at Aus Spr (RLK); now so common & widespread as a breeder in this region that most nesting activity is no longer reported (*Migrant* 68:44-45). **Brown-headed Nuthatch:** 2-24 Mar (2-5)/10 May (1) Ktn. Stm. Pl. (DJT/JDJ). **Sedge Wren:** 3 May (1) Bra Lev (RJH, RLK, ARH, JWB, m.ob.). **Marsh Wren:** 5 Apr (1) Knox Co (DJT); 26 Apr-8 May (1-2) Aus Spr (RLK, FJA). **American Pipit:** 9 May (4) Sullivan Co (TSM); thru 10 May (10+) Aus Spr (RLK, FJA); both late. **Loggerhead Shrike:** regular over period at one Greene Co site (ACL, DHM). **Warbling Vireo:** 29 Mar (1) Hmlt. Co (DFV), record early arrival in state & very rare in Chattanooga area; 2 May (1) Rkn Bot (RLK); 2 May (1) Bowmantown, Wash. Co (RLK); 9 May (2) Blountville, Sullivan Co (TSM); 11 May (3/3) Boone's Creek, Wash. Co/Kingsport (RLK); known to breed at the latter 5 sites. **Philadelphia Vireo:** 10 May (1) Hmlt. Co (TLR).

Warbler-Siskin: **Blue-winged Warbler:** 24 May (2 pr) Oak Ridge Reservation, Roane Co (JDJ). **Prothonotary Warbler:** 25 Apr (2) Nol. Wat. Sct. (ACL, DHM); 26 Apr (2) Aus Spr (RLK, THF); 2 May (2+) Rkn Bot (RLK); 26/31 May (pr feeding nestlings/pr with 2 fledglings) Oak Ridge Reservation, Roane Co (JDJ). **Swainson's Warbler:** 26 Apr (1) Craven's House, Hmlt. Co (KAC); 2 May (1) Sharp's Ridge, Knoxville (JDJ); 15-23 May (1) Winged Deer Park, Johnson City (RLK, FJA); rarely encountered away from breeding areas. **Mourning Warbler:** 18 May (1) Wash.Co (ARH, JWB). **Canada Warber:** 30 May (1 banded) Marion Co (DFV), lrs. **Blue Grosbeak:** 14 May (10) Wash.Co (RLK), max. **Dickcissel:** 2 May thru season (7+ at 3 sites) Wash.Co (RLK); 4 May (1) Hmlt Co (KAC). **Henslow's Sparrow:** 4 May (1) Tusculum (ACL, DHM). **Lincoln's Sparrow:** 3 May (1 banded) Amnicola Marsh, Hmlt. Co (DFV). **Swamp Sparrow:** 13 May (2) Aus Spr (RLK), lrs. **White-throated Sparrow:** 21 May (1) Greene Co (ACL, DHM), lrs. **Pine Siskin:** 1 Mar (1) Greene Co (ACL, DHM); 1 May (2) Sequatchie Co (Clyde Blum).

Locations: Aus Spr-Austin Springs, Washington Co; Boone L-in Sullivan & Washington Cos; Bra Lev-Brainerd Levee, Hamilton Co; Eagle Bend-Eagle Bend Fish Hatchery, Anderson Co; Hmlt. Co-Hamilton Co; Ktn. Stm. Pl.-Kingston Stream Plant, Roane Co; Limestone-in Washington Co; New Market-in Jefferson Co; Nol. Wat. Sct.-Nolichucky Waterfowl Sanctuary, Greene Co; Rkn Bot-Rankin Bottoms, Cocke Co; Tusculum-in Greene Co; Wash. Co-Washington Co

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EASTERN MOUNTAIN REGION: Mild temperature persisted through the period. Precipitation was above normal. Nesting efforts were recorded for Yellow-crowned Night-Heron, Sharp-shinned Hawk, Cooper's Hawk, Northern Saw-whet Owl and Loggerhead Shrike, and suspected breeding later verified for Peregrine Falcon.

Loon-Duck: **Red-throated Loon:** 15 Mar-6 Apr (1-2) S. Hol. L (LCM, JWC et al.) first NE Tenn record for March. **Common Loon:** 19 Mar (5) S. Hol. L (JWC, LCM), max; 14 May (1) S. Hol. L (Rusty Dunn), lrs. **Pied-billed Grebe:** 8 Mar (271) S. Hol. L (RMC, RBB), unusually high count. **Horned Grebe:** 16 Mar (16) S. Hol. L (JWC, LCM), max. **Eared Grebe:** 2 Mar (19) S. Hol. L (LCM, JWC), max; 22 Apr (1) S. Hol. L (LCM, JWC), lrs. **Double-crested Cormorant:** 9 Apr (23) S. Hol. L (RLK), max. **Snowy Egret:** 11 Apr (1) Chota, Monroe Co (Bill Sullivan). **Great Egret:** 11 Apr (1)

Chota, Monroe Co (Bill Sullivan); 12 May (1) S. Hol. L (JWC, RMC, LCM). **Black-crowned Night-Heron:** 30 Mar (1) Middlebrook L, Sullivan Co (JWC, Kevin Hamed). **Yellow-crowned Night-Heron:** 19 Mar (1 ad) Elizabethton (TSM), new local early date; 23 Apr (1 on nest) Elizabethton (RLK). **Lesser Scaup:** 29 Mar (41) Shady Valley (JWC), record high number for this location. **Bufflehead:** 9 May (1) Wilbur L, Carter Co (FJA), lrs. **Red-breasted Merganser:** 6 Apr (10) Watauga L, Carter Co (RLK); 30 Apr (10) S. Hol. L (LCM et al.). **Ruddy Duck:** 6 Apr (2) S. Hol. L (LCM et al.).

Vulture-Tern: **Black Vulture:** 8 Mar (50+) S. Hol. L (RMC, RBB). **Turkey Vulture:** 3 Mar (355) S. Hol. L (RBB), NE Tenn record count. **Osprey:** 16 Mar (1) Watauga R., Carter Co (LCM, JWC), ers; 26 Apr (4) S. Hol. L (JWC et al.), max, good numbers migrating through. **Bald Eagle:** 4 Mar (1 im) S. Hol. L (JWC). **Sharp-shinned Hawk:** mid Apr (f building nest) Roan Mt. S. P. campground (Bryan Stevens, Charles Moore), nest later abandoned. **Cooper's Hawk:** 20 Apr (pair with nest) S. Hol. L (Robert Riggs, Dave Worley, Greg Harris, Charles Lane). **Red-shouldered Hawk:** 22 Mar (1) Laurel Lake Wildlife Refuge, Blount Co (DJT et al.); 22 Mar (1) Cades Cove, GSMNP (DJT et al.). **Merlin:** 9 Mar (2) S. Hol. L, one in Sullivan Co, TN and one in Washington Co, VA (JWC, LCM, RMC, RBB, Geoff Larsen). **Peregrine Falcon:** 9 Mar (1) S. Hol. L (JWC, LCM, RMC, RBB, Geoff Larsen); 12 Mar thru period (pair on territory) GSMNP (RLK); 3 May (1) Roan Mt. (GOW).

Crane-Owl: **Sandhill Crane:** 22 Mar (1 flying) Laurel Lake Wildlife Refuge, Blount Co (DJT et al.). **Virginia Rail:** 22 Mar (2 or 3) Laurel Lake Wildlife Refuge, Blount Co (DJT et al.). **Greater Yellowlegs:** 9 Apr (1) S. Hol. L (RLK). **Lesser Yellowlegs:** 3 May (17) Middlebrook L, Sullivan Co (JWC). **Pectoral Sandpiper:** 3 May (5) S. Hol. L (RMC, JWC). **Dunlin:** 16 Mar (2) S. Hol. L (LCM et al.). **American Woodcock:** 9 May (5) Jacob's Creek, Sullivan Co (RBB), max. **Bonaparte's Gull:** 9 Apr (80) S. Hol. L(RLK). **Ring-billed Gull:** 2 Mar (560) S. Hol. L (LCM, JWC), max. **Caspian Tern:** 19 Apr (1) S. Hol. L (JWC et al.), ers; 30 Apr (7) S. Hol. L (LCM et al.), max. **Forster's Tern:** 26 Apr (1) Watauga L, Carter Co (GOW); 12 May (2) S. Hol. L (JWC, RMC, LCM). **Mourning Dove:** 30 Apr (2 cooing) Roan Mt. at 4450 ft. elev. (RLK), highest regularly occurring site. **Black-billed Cuckoo:** 7 May (1) Hampton Creek Cove, Roan Mt. (FJA); 12 May (1) Milligan College, Carter Co (GOW). **Northern Saw-whet Owl:** 6 Mar (4 eggs), 7 May (4 yg) Roan Mt. (FJA), in nest box at 5500 ft. elev.

Swallow-Siskin: **Tree Swallow:** 9 Mar (1) Shady Valley (JLS, LAS), ers; mid May (nest in bluebird box) Simmerly Creek, Carter Co (Bryan Stevens). **Bank Swallow:** 26 Apr (2) Ripshin L. (Tom Laughlin). **Cliff Swallow:** 9 Apr (2) S. Hol. L (RLK), ers. **Common Raven:** 22 Mar (ad on nest) Devil's Looking Glass, Unicoi Co (RLK); 27 Mar (1) Unicoi, Unicoi Co (FJA); 30 Mar (2) Middlebrook L, Sullivan Co (JWC, Kevin Hamed); 11 Apr (2) Nolichucky R. gorge, Unicoi Co (Joe McGuiness). **Carolina Wren:** 12 May (1) near Alum Cave Bluff, GSMNP (RLK), at 4300 ft. elev. in rock slide. **Loggerhead Shrike:** 9 Apr (pr with nest) Holston Valley, Sullivan Co (JWC, LCM). **Blue-headed Vireo:** 22 Mar (1) Cades Cove, GSMNP (DJT et al.); 13 May (1 fledged yg) Rock Creek Park, Unicoi Co (FJA), indicates an early nesting. **Brewster's Warbler:** 7, 14, 22 May (1) Burbank, Roan Mt. (FJA), back on last year's territory, sang Golden-winged Warbler song. **Northern Parula:** 28 Mar (1) S. Hol. L (Greg Harris), record early for NE Tenn by one day. **Yellow-throated Warbler:** 22 Mar (2) Cades Cove, GSMNP (DJT et al.). **Pine Warbler:** 1 Mar (1) S. Hol. L (RLK), ers.

Blackpoll Warbler: 12 May (1) S. Hol. L (JWC, RMC, LCM). **Cerulean Warbler:** 19 Apr (1) Shady Valley (JLS, LAS). **Swainson's Warbler:** 13 May (1) Rock Creek Park, Unicoi Co (FJA). **Northern Waterthrush:** 25 May (1 banded) Holston Valley, Sullivan Co (Richard Lewis), Tenn late spring departure date by one day. **Blue Grosbeak:** 3 May (1) Roan Mt. S. P. (GOW). **Vesper Sparrow:** 3 Mar (23) Shady Valley (JLS, LAS); 14 Apr (1) Sugarlands, GSMNP (Joel Keebler et al.). **Brown-headed Cowbird:** 30 Apr (1 f) Roan Mt. (RLK), 4450 ft. elev., highest regularly occurring site. **Pine Siskin:** 12, 30 Apr, 7 May (1-4) Roan Mt. (RLK, FJA); 12 May (1) Alum Cave Bluff, GSMNP (RLK); 17 May (1) Newfound Gap, GSMNP (RLK).

Locations: GSMNP-Great Smoky Mountains National Park; Roan Mt.-in Carter Co; Roan Mt. S. P.-in Carter Co; Shady Valley-in Johnson Co; S. Hol. L-South Holston Lake, Sullivan Co

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Standard Abbreviations

ad - adult
Co - County
EOP - end of period
ers - earliest reported sighting
et al. - and others
f - female
fide - reported by
im - immature
L - Lake
lrs - latest reported sighting
m - male
max - maximum count
m. ob. - many observers
pr - pair
yg - young

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FJA - Fred J. Alsop
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JWB - James W. Brooks
CHB - Carolyn H. Bullock
KAC - Kevin A. Calhoon
RMC - Ron M. Carrico
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BHW - Barbara H. Wilson
JRW - Jeff R. Wilson
TJW - Terry J. Witt
JAZ - John A. Zempel
LVZ - Linda V. Zempel
MTOS - Memphis Chapter, TOS
NTOS - Nashville Chapter, TOS
TWRA - Tennessee Wildlife Resources Agency

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NOTICE TO RESEARCHERS

Several references in this issue include dates later than the cover date of September 1997. The journal is behind schedule and it has been necessary to use material which, in some cases, was submitted and accepted later in the year.

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